

**REMOVAL ASSESSMENT REPORT  
FOR THE  
BAKER PERKINS SITE  
SAGINAW, SAGINAW COUNTY, MICHIGAN**

**NPL STATUS: NON-NPL**

Prepared for:

**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
Emergency Response Branch  
Region V  
9311 Groh Road  
Grosse Ile, MI 48138-1697

Prepared by:

**WESTON SOLUTIONS, INC.**  
6779 Engle Road  
Suites I & J  
Middleburg Heights, OH 44130

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WESTON START Project Manager:	Ryan Green
Telephone No.:	(440) 202-2811
EPA On-Scene Coordinator:	Tricia Edwards

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May 23, 2014

Prepared by:  Date: 6/11/2014  
Andrew Kiel  
WESTON START Site Lead

Reviewed and  
Approved by:  Date: 6/11/2014  
Ryan Green  
WESTON START Project Manager

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## ABBREVIATIONS AND ACRONYMS

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°F	Degree Fahrenheit
ACM	Asbestos-containing material
ACWM	Asbestos-containing waste material
ASHERA	Asbestos Hazard Emergency Response Act
AKT	AKT Peerless Environmental & Energy Services
AST	Aboveground storage tank
Baker Perkins	Baker Perkins Ltd.
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CFR	<i>Code of Federal Regulations</i>
DRO	Diesel-range organics
ERB	Emergency Response Branch
f/cc	Fiber per cubic centimeter
FSP	Field Sampling Plan
GRO	Gasoline-range organics
HA	Homogeneous area
LLC	Limited Liability Corporation
mg/kg	Milligram per kilogram
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NIOSH	National Institute for Occupational Safety and Health
NOB	Non-friable organically bound
NVLAP	National Voluntary Laboratory Accreditation Program
ORO	Oil-range organics
OSC	On-Scene Coordinator
PCB	Polychlorinated biphenyl
PCM	Phase Contrast Microscopy
PLM	Polarized Light Microscopy
ppm	Part per million
RACM	Regulated asbestos-containing material
RML	Removal Management Level
START	Superfund Technical Assessment and Response Team

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## ABBREVIATIONS AND ACRONYMS (CONTINUED)

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SU	Standard unit
SVOC	Semivolatile organic compound
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
TSI	Thermal system insulation
UST	Underground storage tank
VOC	Volatile organic compound
WESTON	Weston Solutions, Inc.

## 1. INTRODUCTION

Under Technical Direction Document No. S05-0001-1404-004, the U.S. Environmental Protection Agency Region 5 Emergency Response Branch (ERB) tasked the Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START) to evaluate the potential threat of release of asbestos fibers from asbestos-containing materials (ACM) from the Baker Perkins Site in Saginaw, Saginaw County, Michigan (the Site). Specifically, the EPA tasked START with the following activities:

- Conduct an asbestos assessment of the demolition debris at the Site, and collect bulk samples for laboratory analysis
- Collect samples of wood block flooring materials for laboratory analysis
- Document the presence of drums and small containers, and collect samples for laboratory analysis
- Document any potential Site-related threats to the public health or welfare of the United States or the environment in a Removal Assessment report

On April 22, 2014, two START members mobilized to the Site under the direction of EPA On-Scene Coordinator (OSC) Tricia Edwards.

This Removal Assessment report is organized into the following sections:

- **Section 1, Introduction** – Provides a brief description of the objective and scope of removal assessment activities
- **Section 2, Site Background** – Details the Site description, history, and state and local regulatory history
- **Section 3, Removal Assessment Tasks** – Discusses the observations made, tasks conducted, and methods and procedures used during the Removal Assessment
- **Section 4, Analytical Results** – Discusses analytical results for samples collected during the Removal Assessment
- **Section 5, Threats to Human Health and the Environment** – Identifies conditions at the Site that warrant a removal action under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP)
- **Section 6, Summary and Conclusions** – Summarizes the Removal Assessment and presents conclusions drawn based on Removal Assessment findings

Figures and tables are presented after **Section 6**. In addition, this report contains two appendices. **Appendix A** presents a photographic log of Site conditions and Removal Assessment activities at the time of the Removal Assessment. **Appendix B** provides the laboratory analytical reports and data validation report for samples collected during the Removal Assessment.

## 2. SITE BACKGROUND

This section discusses the Site description, Site history, and state and local regulatory history.

### 2.1 SITE DESCRIPTION

The Site is located at 1010 Hess Avenue in Saginaw, Saginaw County, Michigan, in a mixed residential, commercial, and industrial area (**Figure 1**). The Site coordinates are 43°23'59.09" North latitude and 83°57'04.66" West longitude. The Site occupies approximately 12.5 acres. According to the Saginaw County Auditor's Office, the Site is located on Parcels No. 12045100000, 12045100200, 12045100400, 12045100500, 12045100600, 12045100700, 12045100800, and 12045100900. During the Removal Assessment, Parcel No. 12045100500 was owned by the Saginaw County Land Bank Authority and the remaining parcels were owned by the Saginaw Development Limited Liability Corporation (LLC).

During the Removal Assessment, on-site structures included numerous, multi-story industrial buildings. Many of the industrial buildings had been demolished, and large piles of demolition debris remained within the footprint of the former buildings. Some remaining buildings were intact or partially intact. **Figure 2** shows the Site features during the Removal Assessment.

The Site is bounded to the north by residential properties, to the east by a car wash and residential properties, to the south by a cemetery, and to the west by the Process Equipment and Systems industrial buildings. During the Removal Assessment, the Site was enclosed by a perimeter fence. However, at least one section of the fence had been breached, and evidence of trespassing was observed at the Site.



## 2.2 SITE HISTORY

In 1896, the Werner & Pfleiderer Company purchased the Site and constructed a factory for manufacturing grain mixers. In 1919, Baker Perkins Ltd. (Baker Perkins) purchased the Site to design and manufacture industrial mixing equipment for foods, pharmaceuticals, chemicals, and other raw materials. Baker Perkins also operated a foundry and pattern and machining shops at the Site for metal manufacturing processes. During World War II, Baker Perkins also manufactured ovens and a variety of wartime equipment.

Production decreased at the Site during the 1970s and 1980s. Baker Perkins ceased manufacturing activities at the Site in the 1990s. Some on-site buildings were leased to several small businesses after Baker Perkins ceased operations at the Site. Vandalism and criminal activity reportedly increased at the Site in and around abandoned buildings, and most buildings began to fall into a state of disrepair. The Site parcels eventually reverted to the Saginaw County Land Bank Authority due to unpaid taxes.

On September 15, 2011, Saginaw Development LLC purchased all but one of the Site parcels. On October 13, 2011, the City of Saginaw issued a demolition permit to Saginaw Development LLC. The permit expired on April 30, 2012. Under the permit, many former manufacturing buildings were demolished, and metal building materials were scrapped by the demolition contractor.

## 2.3 STATE AND LOCAL REGULATORY HISTORY

On October 10, 2013, the Saginaw County Land Bank Authority hired an environmental contractor, AKT Peerless Environmental & Energy Services (AKT), to evaluate Site conditions and collect samples for laboratory analysis. AKT prepared a letter report dated October 24, 2013, documenting the activities, findings, and recommendations summarized below.

- Three bulk samples of Transite and six bulk samples of roofing materials were collected from demolition debris to determine the presence of asbestos. Laboratory analytical results indicated that the sampled Transite and roofing materials contained up to 30 and 25 percent chrysotile asbestos, respectively. The Transite and roofing materials were

comingled with general demolition debris, and the volume of ACM in the debris piles could not be quantified.

- Two samples of wood block flooring were collected from visually stained areas in the northern and central portions of the Site. The AKT report provides contradictory information, first stating that the wood block sample results “were below Regulatory Limits to quality [*sic*] for non-hazardous [*sic*] landfill disposal,” and then stating that the wood block “must be disposed of at a licensed Class II Landfill.”
- Analytical results for one liquid sample collected from a pit in the central portion of the Site exceeded State of Michigan criteria for the protection of groundwater, including criteria for lead; silver; fluoranthene; 3,4-methylphenol; and phenanthrene.

ACM had not been properly removed from the Site buildings before demolition. Based on observations by personnel from the Saginaw County Land Bank Authority and AKT, damaged ACMs including Transite and roofing materials were comingled with demolition debris throughout the footprint of the former Site buildings.

On March 4, 2014, the Saginaw County Land Bank Authority requested assistance from the EPA Region 5 ERB to evaluate and remove the potential for imminent and substantial threats to the public health or welfare of the United States or the environment posed by Site-related conditions. The Saginaw County Land Bank Authority provided a list of Site-related environmental assessment documents prepared between 1998 and 2007. However, these documents were not available for review before START conducted the Removal Assessment.

### 3. REMOVAL ASSESSMENT TASKS

In April 2014, the EPA tasked START to inspect the Site and collect samples for laboratory analysis to evaluate or confirm the presence of (1) asbestos within the demolition debris piles; (2) polychlorinated biphenyls (PCB) on oil-stained wood block flooring material; and (3) hazardous wastes in drums, tanks, and small containers at the Site. **Section 3.1** discusses observations made during the Removal Assessment. **Section 3.2** discusses the assessment and sampling of known and suspected ACM observed comingled with demolition debris at the Site. **Section 3.3** discusses breathing zone air sampling during the asbestos assessment activities. **Section 3.4** discusses sampling of oil-stained wood block flooring. **Section 3.5** discusses the

container inventory and sampling. **Appendix A** presents a photographic log of Site conditions and Removal Assessment activities.

### **3.1 REMOVAL ASSESSMENT OBSERVATIONS**

On April 22, 2014, START mobilized to the Site and divided the Site into Areas 1 through 7 as shown on **Figures 2 through 5**. Each area corresponds to a debris field in the footprint of former manufacturing buildings or to open areas near the former buildings. **Figure 2** shows the locations of intact and partially intact buildings. For safety reasons, inspection and sampling activities were not conducted inside partially demolished structures or under potentially unstable debris.

Most buildings appear to have been demolished in-place. Many demolition debris piles remained within the footprints of the former buildings. Three small stockpiles of scrap metal were observed in open areas between the debris piles in Areas 3 and 4. During the Removal Assessment, it was apparent that most of the salvageable metallic building materials had been segregated from the debris piles during the demolition process and removed from the Site for metal scrapping. Many manhole covers also were missing at the Site and presumably have been removed for metal scrapping.

Track marks from heavy equipment were observed on top of the demolition debris piles containing ACM, suggesting that ACM building materials were not handled properly during demolition activities and may have been crushed and damaged. No visible signs of off-site migration of suspected ACM were observed during the Removal Assessment.

### **3.2 ASSESSMENT AND SAMPLING OF KNOWN AND SUSPECTED ACM**

A START asbestos inspector with certification in the State of Michigan conducted a visual inspection of the Site to assess the condition and location of known and suspected ACM in Areas 1 through 7. Non-intrusive inspection methods were used. Therefore, all observations and samples collected of suspected ACM were limited to materials located on the surface of the debris or on the ground surface. Evaluation of the quantity and types of ACM under the surface

of the debris piles would have required heavy equipment and particulate suppression techniques outside the scope of this Removal Assessment.

Demolition debris was observed in Areas 3, 4, and 6. Little to no demolition debris was observed in Areas 1, 2, 5, and 7, and no bulk samples of suspected ACM were collected from these areas. Each sample of suspected ACM was manually evaluated for friability and placed in a plastic bag for delivery to the designated laboratory, EMSL Analytical, Inc., in Cinnaminson, New Jersey. START requested analysis for asbestos fibers by Polarized Light Microscopy (PLM) Method 600/R-93/116. If asbestos was not detected using PLM, the laboratory was instructed to also analyze the samples for non-friable organically bound (NOB) asbestos fibers using PLM.

START's site-specific Field Sampling Plan (FSP) specified collection of surface soil samples near debris piles containing suspected ACM for analysis for asbestos fibers. However, the demolition debris was located on concrete surfaces and no surface soil samples were collected.

During the visual inspection and sampling activities, the START asbestos inspector grouped similar types of suspected ACM in the debris piles into distinct homogenous areas (HA) based on appearance, type, and location. This method of reconstructing potential HAs within the demolished buildings was consistent with Asbestos Hazard Emergency Response Act (AHERA) guidelines at Title 40 of the *Code of Federal Regulations* (CFR), Part 763.86. However, for the purpose of waste disposal characterization, all the ACM in the debris piles was considered damaged and comingled with other non-ACM demolition debris at the Site.

Suspected ACM found in debris piles located in Areas 3, 4, and 6 were categorized into 15 HAs. Each HA consists of one type of AHERA-specified category of building materials, including thermal system insulation (TSI), surfacing materials, and miscellaneous materials. Observations of suspected ACM and bulk samples collected for laboratory analysis from Areas 3, 4, and 6 are discussed below. **Figure 3** shows the asbestos sampling locations, and **Table 1** lists the samples collected.

### Area 3

Building materials visually identified in the demolition debris piles in Area 3 included the

following: concrete, asphalt roofing, roof insulation, rebar, brick, mortar, white roofing material, yellow roofing foam insulation, pre-fabricated concrete roof sections, steel pipe, electrical conduit, glass, wood planks, wood blocks, slate, brown fibrous cellulose board, brown granular cellulose board, fibrous panels with punch-outs, Transite (by the former electrical room), furniture, metal sheeting, green foam insulation, wire mesh, stone, cardboard, plastic pallets, one empty 55-gallon drum, one crushed 55-gallon drum, suspect TSI, fire brick, fiberglass, and slag.

Samples of the following suspected ACMs were collected from the debris piles in Area 3:

- Transite by the former electrical room (samples BP-BLK-HA1-A and duplicate BP-BLK-DUP1, BP-BLK-HA1-B, BP-BLK-HA1-C)
- A different type of Transite by the former electrical room (samples BP-BLK-HA2-A, BP-BLK-HA2-B, BP-BLK-HA2-C)
- Felt roofing material located throughout the debris piles (samples BP-BLK-HA3-A, BP-BLK-HA3-B, BP-BLK-HA3-C)
- Asphalt roofing material located throughout the debris piles (samples BP-BLK-HA4-A, BP-BLK-HA4-B and duplicate BP-BLK-DUP2, BP-BLK-HA4-C)
- Suspected TSI in a small pile at the southwest corner of Area 3 (samples BP-BLK-HA5-A, BP-BLK-HA5-B, BP-BLK-HA5-C)
- Fire brick in a small pile at the southwest corner of Area 3 (samples BP-BLK-HA6-A, BP-BLK-HA6-B, BP-BLK-HA6-C)

#### Area 4

Building materials visually identified in the demolition debris piles in Area 4 included the following: concrete, asphalt roofing, roof insulation, rebar, brick, mortar, pre-fabricated concrete roof sections, steel pipe, conduit, glass, wood planks, wood blocks, brown fibrous cellulose board, brown granular cellulose board, Transite, metal sheeting, green foam insulation, wire mesh, stone, fiberglass, yellow brick and mortar, Styrofoam, corrugated metal sheeting, oriented strand board, wire, pipe insulation, plaster, and plywood.

Samples of the following suspected ACMs were collected from the debris piles in Area 4:

- Transite (samples BP-BLK-HA7-A, BP-BLK-HA7-B, and BP-BLK-HA7-C and duplicate sample BP-BLK-DUP3)

- Suspected TSI in a small portion of the debris pile near the center of Area 4 (sample BP-BLK-HA8-A); only one bulk sample collected because of the small quantity of material available for sampling
- Suspected rough coat plaster located in a small portion of the debris pile near the center of Area 4 (sample BP-BLK-HA9-A); only 1 bulk sample was collected because of the small quantity of material available for sampling.
- Suspected surfacing plaster in a small portion of the debris pile near the center of Area 4 (sample BP-BLK-HA10-A); only one bulk sample collected because of the small quantity of material available for sampling
- Felt roofing material located throughout the debris piles (samples BP-BLK-HA11-A, BP-BLK-HA11-B, BP-BLK-HA11-C)
- Asphalt roofing material located throughout the debris piles (samples BP-BLK-HA12-A, BP-BLK-HA12-B, BP-BLK-HA12-C)

#### Area 6

Building materials visually identified in the demolition debris piles in Area 6 included the following: concrete, asphalt roofing, roof insulation, rebar, brick, mortar, pre-fabricated concrete roof sections, steel pipe, conduit, glass, wood planks, wood blocks, brown fibrous cellulose board, brown granular cellulose board, Transite, metal sheeting, slate, wire mesh, stone, fiberglass, white brick and mortar, translucent plastic panels, plastic pipe, fire brick, asphalt, chain-link fence, wood pallets, welders curtain, slate, and plywood.

Samples of the following suspected ACMs were collected from the debris piles in Area 6:

- Fire brick in a small portion of debris near the center of Area 6 (samples BP-BLK-HA13-A and duplicate BP-BLK-DUP4, BP-BLK-HA13-B, BP-BLK-HA13-C)
- Felt roofing material located throughout the debris piles (samples BP-BLK-HA14-A, BP-BLK-HA14-B, BP-BLK-HA14-C)
- Asphalt roofing material located throughout the debris piles (samples BP-BLK-HA15-A, BP-BLK-HA15-B, BP-BLK-HA15-C)

### **3.3 BREATHING ZONE AIR SAMPLING**

One air sample (BP-AIR-01) was collected during the asbestos assessment activities to determine if asbestos fibers were present in the breathing zone while the START asbestos inspector assessed the debris piles and collected bulk samples of suspected ACM. The air sample was

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collected using a personal air sampling pump attached to a mixed cellulose ester cassette for analysis using the National Institute of Occupational Safety and Health (NIOSH) Method 7400 for Phase Contrast Microscopy (PCM). In accordance with the analytical method, two field blanks (BP-AIR-FB1 and BP-AIR-FB2) also were shipped to the laboratory for PCM analysis.

### 3.4 SAMPLING OF WOOD BLOCK FLOORING

Wood block flooring samples were collected to determine PCB concentrations and the likelihood of exposure of unauthorized personnel to this potential hazard. EPA and START visually located oil-stained wood block flooring materials at the Site and collected samples for analysis at the designated laboratory, EA Group in Mentor, Ohio. **Figure 4** shows the approximate wood block flooring sampling locations. **Table 2** lists the samples collected.

One composite sample (BP-WB-01) was collected using a decontaminated hammer and chisel to shave the oil-stained surfaces from wood block flooring collected from the northern portion of Area 4. All other composite wood block samples were collected by gathering wood block fragments found on the ground surface in each sampling location shown in **Figure 4** and placing them into laboratory-provided containers. Each composite sample contained approximately 50 grams of wood fragments. Five composite wood block flooring samples and one duplicate sample were collected from the Site as summarized below.

#### Area 4

- Sample BP-WB-01 was collected from the northern end of Area 4.
- Sample BP-WB-02 and duplicate sample BL-WB-DUP1 were collected from the west-central portion of Area 4.
- Sample BP-WB-03 was collected from the south-central portion of Area 4.

#### Area 6

- Sample BP-WB-04 was collected from throughout the central portion of Area 6.

#### Building South of Area 3

- Sample BP-WB-05 was collected from wood blocks stockpiled inside the building south of Area 3.

### 3.5 CONTAINER INVENTORY AND SAMPLING

Abandoned drums, tanks, and totes containing unknown wastes were observed at the Site during the Removal Assessment. **Figure 5** shows the approximate container sampling locations, and **Table 3** lists the container samples collected. Containers observed and samples collected are discussed below, followed by a discussion of a deviation from the FSP.

#### Area 2

One 55-gallon drum was observed in the water treatment building located near the northwest corner of Area 2. This drum contained sand. No samples were collected from this drum.

Former “Building 14” was an intact structure located east of the water treatment building near the northwest corner of Area 2. The building was empty and appeared to have been used as a machine shop. The floor was heavily stained with oil and spent sorbents. No samples were collected from the floor of Building 14.

One underground storage tank (UST) was observed east of Building 14. START measured the vertical distance from the ground surface to the bottom of the UST as 12 feet. The vertical distance from the ground surface to the liquid surface inside the UST was 5 feet, 7 inches. Based on these measurements, the UST capacity was estimated at 15,000 gallons. Liquid inside the UST appeared to be diesel fuel, and no water layer was observed. Liquid sample BP-LIQ-02 was collected from the UST.

#### Area 3

Two unlabeled 55-gallon steel drums were observed in demolition debris piles on the eastern portion of Area 3. One 55-gallon drum was crushed, and the other drum was intact but empty. There were no signs of staining on the ground surface near these drums. No samples were collected from these drums.

#### Building South of Area 3

Seven 5-gallon containers were found on the ground floor of the building south of Area 3. These small containers were partially filled with liquid and located inside steel secondary containment.

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A small quantity of standing water with a sheen on the surface was observed on the floor of the secondary containment. Two of the 5-gallon containers were labeled "Benchmark F-126-M (CL-11)," a cleaning compound. Another two of the 5-gallon containers were labeled "Milicron," a concentrated metal working fluid. One 5-gallon container was labeled "Chemtool Incorporated Stripper Additive." The last two 5-gallon containers either were not labeled or the label was too damaged to read. These small containers were not opened or sampled during the Removal Assessment.

One unlabeled 55-gallon polyethylene drum was located on the ground floor of the building south of Area 3. The drum contained approximately 35 gallons of what appeared to be oil, and there were no signs of oil staining on the ground surface near the drum. Sample BP-LIQ-01 was collected from this drum for laboratory analysis.

#### Area 4

One empty, unlabeled 55-gallon polyethylene drum was located within the demolition debris piles in the eastern portion of Area 4. No signs of staining were observed on the ground surface near this drum. No samples were collected from this drum.

#### Area 6

One empty 300-gallon aboveground storage tank (AST) was observed at the northern edge of Area 6. No signs of staining were observed on the ground surface near this AST, and no samples were collected from the AST.

#### Area 7

Two unlabeled 250-gallon polyethylene totes were observed inside a structure located at the southeast corner of Area 7. Both totes were full and appeared to contain oil. No signs of staining were observed on the ground surface near these totes. One liquid sample (BP-LIQ-03) was collected from oil removed from both totes.

Three 10-gallon small containers were observed inside the building located at the southeastern corner of Area 7. All three containers were labeled "Lyondell – Tufflo 6056 Technical White

Mineral Oil” and were full of clear, viscous liquid. Field screening with pH paper indicated that the liquids in these containers were neutral. No signs of staining were observed on the ground surface near these containers. No samples were collected from these containers.

#### Deviation from the FSP

The site-specific FSP proposed collection of one liquid sample from a subsurface vault near the center of the Site in Area 4 that reportedly contained oil. During the Removal Assessment, water with a slight sheen on the surface was observed inside this vault. Based on the lack of a distinct oil layer, the OSC elected to not collect a liquid sample from the vault for laboratory analysis. Other subsurface vaults, sanitary and storm sewer manholes, subsurface voids below the former buildings, and subsurface trenches were also observed. These subsurface spaces contained demolition debris, water, or appeared empty. Based on these visual observations during the Removal Assessment, liquid samples were not collected from these subsurface spaces.

## **4. ANALYTICAL RESULTS**

The following sections discuss the analytical results for samples collected during the Removal Assessment. **Appendix B** provides the laboratory analytical reports and data validation report for the samples collected.

### **4.1 ASBESTOS BULK SAMPLE ANALYTICAL RESULTS**

On April 25, 2014, the bulk samples for asbestos analysis were shipped under chain of custody to EMSL Analytical, Inc., in Cinnaminson, New Jersey. On May 6, 2014, the laboratory analytical reports were transmitted to a START chemist for review and validation. Analytical data related to asbestos analyses does not lend itself to validation. However, START reviewed the analytical methods and data provided by the laboratory and found all laboratory results for the asbestos bulk samples suitable for use.

Each sample was analyzed using PLM techniques in accordance with EPA’s “Method for the Determination of Asbestos in Bulk Building Materials” at 40 CFR, Section 763, Appendix A to Subpart F (EPA Method 600/R-93/116). Laboratory analysis for asbestos fibers was conducted

with a “stop at first positive” approach for each HA. Samples containing NOB materials where asbestos was not detected (BP-BLK-HA4-B and BP-BLK-HA4-C) were re-analyzed using PLM after gravimetric reduction.

According to 40 CFR, Sections 61.141 and 61.143, each layer in a multi-layered sample (a building material consisting of more than one HA) requires separate analysis. The basis for this requirement is to ensure that no dilution occurs by combining layers of ACM with layers of non-ACM. The laboratory observed two different building materials for bulk samples BP-BLK-HA4-A and BP-BLK-HA15-A, and these materials were segregated and analyzed separately.

Based on the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations, if at least one of the bulk samples collected from an HA contains asbestos, then the entire HA must be considered ACM. Materials with greater than 1 percent asbestos content are classified as ACM and are categorized as Category I non-friable ACM, Category II non-friable ACM, or regulated asbestos-containing materials (RACM). According to the NESHAP regulations, materials containing less than 1 percent asbestos may still pose an unreasonable risk to human health. Therefore, any detectable quantity of asbestos in the bulk samples may indicate a potential Site-related threat to the public health or welfare of the United States or the environment.

A total of 43 bulk samples from 15 HAs were analyzed for the presence and concentration of asbestos. Of the 43 samples collected, 39 samples were investigative samples and 4 were duplicate samples. **Table 1** summarizes the analytical results and NESHAP classifications for the samples. **Figure 3** shows the asbestos sampling locations and results. The analytical results for each HA are discussed below, followed by a discussion of duplicate asbestos bulk sample results.

#### HA-1

Asbestos was detected at 15 percent in sample BP-BLK-HA1-A. Therefore, the laboratory did not analyze samples BP-BLK-HA1-B or BP-BLK-HA1-C. Based on the result for sample BP-BLK-HA1-A, HA-1 is non-friable Transite classified as non-friable RACM.

#### HA-2

Asbestos was detected at 15 percent in sample BP-BLK-HA2-A. Therefore, the laboratory did not analyze samples BP-BLK-HA2-B or BP-BLK-HA2-C. Based on the result for sample BP-BLK-HA2-A, HA-2 is non-friable Transite classified as non-friable RACM.

#### HA-3

Asbestos was not detected in any of the three samples collected from HA-3. Based on these results, HA-3 is felt roofing material classified as non-regulated waste.

#### HA-4

Asbestos was detected at 5 percent in sample BP-BLK-HA4-B, 2 percent in sample BP-BLK-HA4-C, and was not detected in sample BLK-HA4-A. Based on these results, HA-4 is non-friable asphalt roofing material classified as a non-friable Category I ACM.

#### HA-5

Asbestos was detected at 20 percent in sample BP-BLK-HA5-A. Therefore, the laboratory did not analyze samples BP-BLK-HA5-B or BP-BLK-HA5-C. Based on the result for sample BP-BLK-HA5-A, HA-5 is friable TSI classified as friable RACM.

#### HA-6

Asbestos was detected at 2 percent in sample BP-BLK-HA6-C and was not detected in samples BP-BLK-HA6-A or BP-BLK-HA6-B. HA-6 consisted of fire brick, and most fire brick is not friable. However, some fire bricks at the Site did crumble under hand pressure. Based on these results, HA-6 contains both non-friable Category II ACM and friable RACM. If the fire bricks in HA-6 are not segregated based on friability during removal activities, then all the fire bricks in HA-6 should be handled as friable RACM.

#### HA-7

Asbestos was detected at 15 percent in sample BP-BLK-HA7-A. Therefore, the laboratory did not analyze sample BP-BLK-HA7-B but did analyze sample BP-BLK-HA7-C for quality control

comparison to the result for duplicate sample BP-BLK-DUP3. Asbestos was detected at 20 percent in BP-BLK-HA7-C. Based on these results, HA-7 is non-friable Transite classified as non-friable RACM.

#### HA-8

Asbestos was not detected in sample BP-BLK-HA8-A. Based on this result, HA-8 is friable TSI classified as non-regulated waste.

#### HA-9

Asbestos was not detected in sample BP-BLK-HA9-A. Based on this result, HA-9 is rough coat plaster classified as non-regulated waste.

#### HA-10

Asbestos was not detected in sample BP-BLK-HA10-A. Based on this result, HA-10 is surfacing plaster classified as non-regulated waste.

#### HA-11

Asbestos was not detected in any of the three samples collected from HA-11. Based on these results, HA-11 is non-friable felt roofing material classified as non-regulated waste.

#### HA-12

Asbestos was detected at 10 percent in sample BP-BLK-HA12-C and was not detected in samples BP-BLK-HA12-A or BP-BLK-HA12-B. Based on these results, HA-12 is non-friable asphalt roofing material classified as a non-friable Category I ACM.

#### HA-13

Asbestos was not detected in any of the three samples collected from HA-13. Based on these results, HA-13 is friable fire brick classified as non-regulated waste.

#### HA-14

Asbestos was detected at 50 percent in sample BP-BLK-HA14-C and was not detected in

samples BP-BLK-HA14-A or BP-BLK-HA14-B. Based on these results, HA-14 is non-friable felt roofing material classified as non-friable Category I ACM.

#### HA-15

Asbestos was not detected in sample BP-BLK-HA15-A. However, the laboratory did analyze sample BP-BLK-HA15-B and detected asbestos at 4 percent. The laboratory did not analyze sample BP-BLK-HA15-C. Based on these results, HA-15 is non-friable asphalt roofing material classified as non-friable Category I ACM.

#### Duplicate Asbestos Bulk Sample Results

Duplicate asbestos bulk samples were collected and submitted to the designated laboratory to assess the reproducibility of the PLM results. START reviewed the analytical data to compare the types and concentrations of asbestos observed in each sample and their respective duplicate samples. The comparison is summarized below.

Sample BP-BLK-HA1-A and its duplicate, sample BP-BLK-DUP1, yielded the following results:

- BP-BLK-HA1-A: 15% chrysotile asbestos
- BP-BLK-DUP1: 20% chrysotile asbestos

Sample BP-BLK-HA4-B and its duplicate, sample BP-BLK-DUP2, yielded the following results:

- BP-BLK-HA4-B: 5% chrysotile asbestos
- BP-BLK-DUP2: 5% chrysotile asbestos

Sample BP-BLK-HA7-C and its duplicate, sample BP-BLK-DUP3, yielded the following results:

- BP-BLK-HA7-C: 20% chrysotile asbestos
- BP-BLK-DUP3: 20% chrysotile asbestos

Sample BP-BLK-HA13-A and its duplicate, sample BP-BLK-DUP4, yielded the following results:

- BP-BLK-HA13-A: non-detect for asbestos
- BP-BLK-DUP4: non-detect for asbestos

Based on the comparison results, the asbestos sampling results are consistent for type of asbestos detected and the results demonstrate reproducibility. EMSL Analytical, Inc., is accredited by the National Institute of Standards and Technology under its National Voluntary Laboratory Accreditation Program (NVLAP). The NVLAP is the quality assurance program for laboratories analyzing bulk samples for asbestos content using PLM. The NVLAP Laboratory Code for EMSL Analytical, Inc., is 101048-0.

#### **4.2 BREATHING ZONE AIR SAMPLE ANALYTICAL RESULTS**

On April 25, 2014, the breathing zone air sample for asbestos analysis was shipped under chain of custody to EMSL Analytical, Inc., in Cinnaminson, New Jersey. Asbestos fibers were detected in personal air sample BP-AIR-01 at 8 fibers per 100 fields, or 0.003 fiber per cubic centimeter (f/cc). The presence of asbestos fibers in this sample demonstrates that activities such as walking amongst and on top of the debris piles at the Site and manually manipulating the debris could release asbestos fibers to air in the breathing zone.

#### **4.3 WOOD BLOCK FLOORING SAMPLE ANALYTICAL RESULTS**

On April 25, 2014, the wood block flooring samples were delivered under chain of custody to a courier of the EA Group laboratory in Mentor, Ohio. On May 7, 2014, the laboratory analytical report was transmitted to a START chemist for review and validation. Some qualifiers were added during the validation as noted in the data validation report provided in **Appendix B**.

A total of five investigative samples and one duplicate sample of wood block flooring were analyzed for PCBs using EPA Method 8082. Analytical results were compared to the EPA Removal Management Levels (RML) for PCBs at industrial properties. The analytical results also were compared to the land disposal limit of 50 parts per million (ppm) outlined in the Toxic

Substances Control Act (TSCA) at 40 CFR, Section 761.60, to determine if the wood block flooring materials should be classified as hazardous waste for disposal. **Table 2** summarizes the analytical results for the samples. **Figure 4** shows the wood block flooring sampling locations and results. The analytical results for each area are discussed below.

#### Area 4

Samples BP-WB-01, BP-WB-02 and its duplicate (BP-WB-DUP1), and BP-WB-03 were collected from Area 4. The PCB Aroclor 1248 was detected at 1.1 milligrams per kilogram (mg/kg) in sample BP-WB-02 and at 1.7 mg/kg in duplicate sample BP-WB-DUP1, but neither result exceeds the RML for Aroclor 1248 on industrial properties of 74 mg/kg. PCBs were not detected above the reporting limits in all other wood block flooring samples collected from Area 4. Based on these results, the wood block flooring materials in Area 4 do not exceed the applicable EPA RMLs for determination of a removal action or the TSCA limit for the disposal of PCB wastes.

#### Area 6

PCBs were not detected in the only sample collected from Area 6, BP-WB-04. Based on these results, the wood block flooring materials in Area 6 do not exceed the applicable EPA RMLs for determination of a removal action or the TSCA limit for the disposal of PCB wastes.

#### Building South of Area 3

Sample BP-WB-05 was the only sample collected from the building south of Area 3. PCB Aroclor 1254 was detected at 15 mg/kg in sample BP-WB-05. This result exceeds the RML for Aroclor 1254 on industrial properties of 11 mg/kg. Based on this result, the wood block flooring materials inside the building south Area 3 exceed the applicable EPA RMLs for determination of a removal action but do not exceed the TSCA limit for the disposal of PCB wastes.

## **4.4 CONTAINER SAMPLE ANALYTICAL RESULTS**

On April 25, 2014, the liquid container samples were delivered under chain of custody to a courier of the EA Group laboratory in Mentor, Ohio. On May 7, 2014, the laboratory analytical



report was transmitted to a START chemist for review and validation. Some qualifiers were added during the validation as noted in the data validation report provided in **Appendix B**.

A total of three investigative samples were collected from one UST east of Area 3 (sample BP-LIQ-02), one 55-gallon drum in the building south of Area 3 (sample BP-LIQ-01), and a pair of 250-gallon polyethylene totes in the area at the southeast corner of Area 6 (sample BP-LIQ-03). The liquid container samples were analyzed for the following: flashpoint; corrosivity; total petroleum hydrocarbons (TPH) as gasoline-range organics (GRO), diesel-range organics (DRO), and oil-range organics (ORO); PCBs; total metals; total volatile organic compounds (VOC); and total semivolatile organic compounds (SVOC).

Analytical results for flashpoint, corrosivity, total VOCs, total SVOCs, and total metals were compared to hazardous waste characteristic criteria listed at 40 CFR Section 261 Subpart C. Total VOCs, total SVOCs, and total metals analytical results were evaluated using the EPA “20-times rule” to approximate Toxicity Characteristic Leaching Procedure (TCLP) results for comparison to toxicity characteristic criteria listed at 40 CFR Section 261.24. **Table 3** summarizes the analytical results for the samples. **Figure 5** shows the container sampling locations and results. The analytical results for each sample are discussed below

#### BP-LIQ-01

- This liquid was not ignitable (flashpoint result exceeding 200 degrees Fahrenheit [°F]) and neutral (pH result of 7.1 standard units [SU]).
- TPH ORO was detected at 1,110,000 mg/kg. The laboratory calculated this concentration at greater than 100 percent due to a margin of error associated with dilutions when analyzing samples with high concentrations.
- All other PCB, total metals, total VOC, and total SVOC results were below either the respective reporting limits or applicable screening criteria. However, the laboratory detection limits for volatile analyses were elevated due to interference from the heavy oil matrix of this sample.
- Based on these results, the material from which sample BP-LIQ-01 was collected is characterized as non-regulated, heavy petroleum-based oil waste. However, TCLP analyses would be necessary to characterize this waste for proper disposal.

### BP-LIQ-02

- This liquid was technically not ignitable (flashpoint result of 140 °F) and neutral (pH result of 6.6 SUs). Because ignitable waste is characterized as having a flashpoint of *less than* 140 °F, this result lies on the threshold of the ignitability characteristic and should be interpreted with caution or the UST should be resampled to confirm the result.
- TPH GRO and TPH DRO were detected at 99,000 and 910,000 mg/kg, respectively.
- The VOCs benzene, ethylbenzene, toluene, and xylenes (BTEX) (gasoline constituents) were detected at 37; 540; 590; and 2,200 ppm; respectively. Using EPA's "20-times rule" to approximate TCLP results, the benzene result exceeds the toxicity characteristic for hazardous waste of 0.5 ppm by approximately a factor of 3. The common gasoline additive 1,2,4-trimethylbenzene also was detected at 2,800 ppm.
- All other TPH, PCB, total metals, VOC, and SVOC results were below either the respective reporting limits or applicable screening criteria.
- Based on these results, the material from which sample BP-LIQ-02 was collected is characterized as ignitable (D001), benzene (D018), and gasoline hazardous waste. The ignitable D001 waste code is included because the flashpoint result was at the threshold of the ignitability criterion and because the high concentrations of TPH GRO, TPH DRO, BTEX, and VOC gasoline additives indicate that the material is ignitable gasoline.

### BP-LIQ-03

- This liquid was not ignitable (flashpoint result exceeding 200 °F) and neutral (pH result of 7.2 SUs).
- TPH DRO and TPH ORO were detected at 490,000 and 500,000 mg/kg, respectively.
- The VOCs ethylbenzene, toluene, and xylenes were detected at 13, 12, and 60 ppm, respectively. The common gasoline additive 1,2,4-trimethylbenzene also was detected at 72 ppm.
- All other TPH, PCB, total metals, VOC, and SVOC results were below either the respective reporting limits or applicable screening criteria.
- Based on these results, the material from which sample BP-LIQ-03 was collected is characterized as petroleum-based diesel or fuel oil that should be recycled or properly disposed of.

## **5. THREATS TO HUMAN HEALTH AND THE ENVIRONMENT**

Factors to be considered in determining the appropriateness of a removal action at a Site are delineated in the NCP at 40 CFR Section 300.415(b)(2). A summary of the factors applicable to this Site is presented below.

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- **Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances, pollutants, or contaminants**

During the Removal Assessment, chrysotile asbestos was identified in samples collected from piles of damaged demolition debris at the Site, including Transite, TSI, fire bricks, and roofing materials. Materials at the Site containing asbestos are summarized below.

- Transite in demolition debris piles in Areas 3 and 4 has been damaged and is classified as non-friable RACM.
- TSI and fire brick in demolition debris piles in Area 3 are classified as friable RACM.
- Roofing materials in demolition debris piles in Areas 3, 4, and 6 at the Site are classified as non-friable Category I ACM.

Damaged RACM and non-friable Category I ACM are comingled with non-ACM building materials in the demolition debris piles. Non-friable ACM such as Transite can release particulate asbestos fibers when damaged. Because damaged and friable ACM are comingled with non-ACM building materials, the surfaces of non-ACM building materials in the demolition debris piles may have become contaminated with asbestos.

A personal breathing zone air sample collected during the asbestos assessment activities contained 0.003 f/cc asbestos, confirming the presence of asbestos fibers in the breathing zone at the Site. The damaged ACM in the demolition debris piles at the Site is exposed to ambient wind and weather conditions. Airborne dust generated from the damaged ACM and demolition debris contaminated with asbestos pose a threat to human health through the inhalation of asbestos fibers. According to 40 CFR Section 302.4 of the NCP, asbestos is a hazardous substance. Asbestos is of potential concern because chronic inhalation exposure to airborne asbestos fibers can increase the risk of lung diseases such as asbestosis, mesothelioma, and lung cancer. Sub-acute exposures as short as a few days have been shown to cause mesothelioma.

Wood block flooring materials in a building south of Area 3 were contaminated with PCB oil (Aroclor 1254) at a concentration exceeding the EPA RML. PCBs pose a threat to the health of humans and other animals and are highly persistent in the environment.

An estimated 15,000 gallons of ignitable (D001) and benzene (D018) hazardous waste is present in an abandoned UST near the northwest corner of Area 2 at the Site. The UST is suspected to contain gasoline. Aging USTs are prone to leaking contents into the surrounding soil and groundwater. This UST poses an increasing potential threat of the release of VOCs to the environment the longer its contents remain at the Site.

An estimated 500 gallons of diesel or fuel oil is present in two abandoned 250-gallon polyethylene totes in the area at the southeast corner of Area 7 at the Site. These totes pose a potential threat of accidental or intentional release of VOCs to soil at the Site.

During the Removal Assessment, no signs were posted around the Site perimeter to warn the public of the potential risk of exposure to asbestos or other chemical and physical hazards at the Site. Perimeter fencing has been breached in places, and evidence of unauthorized personnel accessing the Site was observed. Trespassers entering the Site

could easily be exposed to airborne asbestos fibers or come in direct contact with physical hazards in and around the demolition debris piles. Trespassers also could cause accidental or intentional release of asbestos or ignitable (D001) and benzene (D018) wastes stored in abandoned containers at the Site.

- **Actual or potential contamination of drinking water supplies or sensitive ecosystems**

During the Removal Assessment, no surface water bodies were identified on or nearby the Site property. Drinking water for the City of Saginaw is drawn from Lake Huron. Uncontrolled runoff and emissions from asbestos-contaminated debris piles and hazardous fuel contents in abandoned tanks and totes could be released from the Site and migrate into public storm sewer utilities. The locations of storm drains and potential migration pathways of the public storm sewer network were not investigated during this Removal Assessment. It is anticipated that the local storm sewer network ultimately discharges to Lake Huron.

- **Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release**

An estimated 15,000 gallons of ignitable (D001) and benzene (D018) hazardous waste is present in an abandoned UST near the northwest corner of Area 2 at the Site. The UST is suspected to contain gasoline. Aging USTs are prone to leaking contents into the surrounding soil and groundwater. This UST poses an increasing potential threat of the release of VOCs to the environment the longer its contents remain at the Site.

An estimated 500 gallons of diesel or fuel oil is present in two abandoned 250-gallon polyethylene totes in the area at the southeast corner of Area 7 at the Site. These totes pose a potential threat of accidental or intentional release of VOCs to soil at the Site.

- **Weather conditions that may cause hazardous substances, pollutants, or contaminants to migrate or be released**

Damaged ACM and asbestos-contaminated building materials in the demolition debris piles at the Site are exposed to ambient wind and weather conditions. Damaged and friable ACM can release asbestos fibers to air and soil at the Site and pose a threat of off-site release of asbestos fibers.

- **Threat of fire or explosion**

An estimated 15,000 gallons of suspected gasoline and an estimated 500 gallons of suspected diesel or fuel oil are present at the Site.

## 6. SUMMARY

On April 22 and 23, 2014, START collected samples for laboratory analysis from the following wastes located at the Site:

- Suspected ACM in demolition debris piles
- Oil-stained wood block flooring materials
- One 15,000 gallon UST; one 55-gallon drum; and a pair of 250-gallon totes

Chrysotile asbestos was identified in samples collected from the piles of damaged demolition debris at the Site. Damaged Transite in Areas 3 and 4; damaged roofing materials in Areas 3, 4, and 6; damaged and friable TSI in Area 3; and damaged and friable fire bricks in Area 3 tested positive for more than 1 percent asbestos. According to the “Asbestos NESHAP Regulated Asbestos-Containing Materials Guidance” document (EPA-340/1-90-018, dated December 1990), “EPA has since determined that, if severely damaged, otherwise nonfriable materials can release significant amounts of asbestos fibers.” The damaged friable and non-friable ACM in the demolition debris piles at the Site poses a threat of release of asbestos fibers to air, soil, and surface water runoff.

Damaged RACM and non-friable Category I ACM are comingled with non-ACM building materials in the demolition debris piles at the Site. Therefore, non-ACM building debris in the piles may have been contaminated by asbestos fibers and is classified as asbestos-containing waste material (ACWM). Because this Removal Assessment was limited to non-intrusive visual inspection of the surface of the demolition debris piles, it is recommended that an on-site representative trained in accordance with requirements at 40 CFR Section 61.145(c)(8) be present at the Site during removal and disposal activities to determine the actual extent of RACM and ACWM. Based on non-intrusive assessment of the surfaces of the demolition debris piles, the following estimated quantities were observed at the Site:

- 1 cubic yard of ACWM for HA1
- 1 cubic yard of ACWM for HA2
- 2 cubic yards of ACWM for HA5

- 15 cubic yards of ACWM for HA6
- 20 cubic yards of ACWM for HA7.

Based on the approximate square footage of the demolished buildings and an estimated 0.5-inch thickness of roofing materials, START estimates there is approximately 339 cubic yards of Category I roofing materials in the demolition debris piles. According to 40 CFR 61.145 (c) *Procedures for asbestos emission control* “RACM need not be removed before demolition if it is Category I non-friable ACM that is not in poor condition and is not friable.”

Wood block flooring materials in a building south of Area 3 were contaminated with PCB oil (Aroclor 1254) at a concentration exceeding the EPA RML. However, the result does not exceed the TSCA criterion of 50 ppm for land disposal. Therefore, the wood block flooring materials are not characterized as hazardous waste.

An estimated 15,000 gallons of ignitable (D001) and benzene (D018) hazardous waste is present in an abandoned UST east of Area 3 at the Site. The UST is suspected to contain gasoline. Aging USTs are prone to leaking contents into the surrounding soil and groundwater. This UST poses an increasing potential threat of the release of VOCs to the environment the longer its contents remain at the Site.

An estimated 500 gallons of diesel or fuel oil is present in two abandoned 250-gallon polyethylene totes in the area at the southeast corner of Area 7 at the Site. These totes pose a potential threat of accidental or intentional release of VOCs to soil and surface water at the Site.

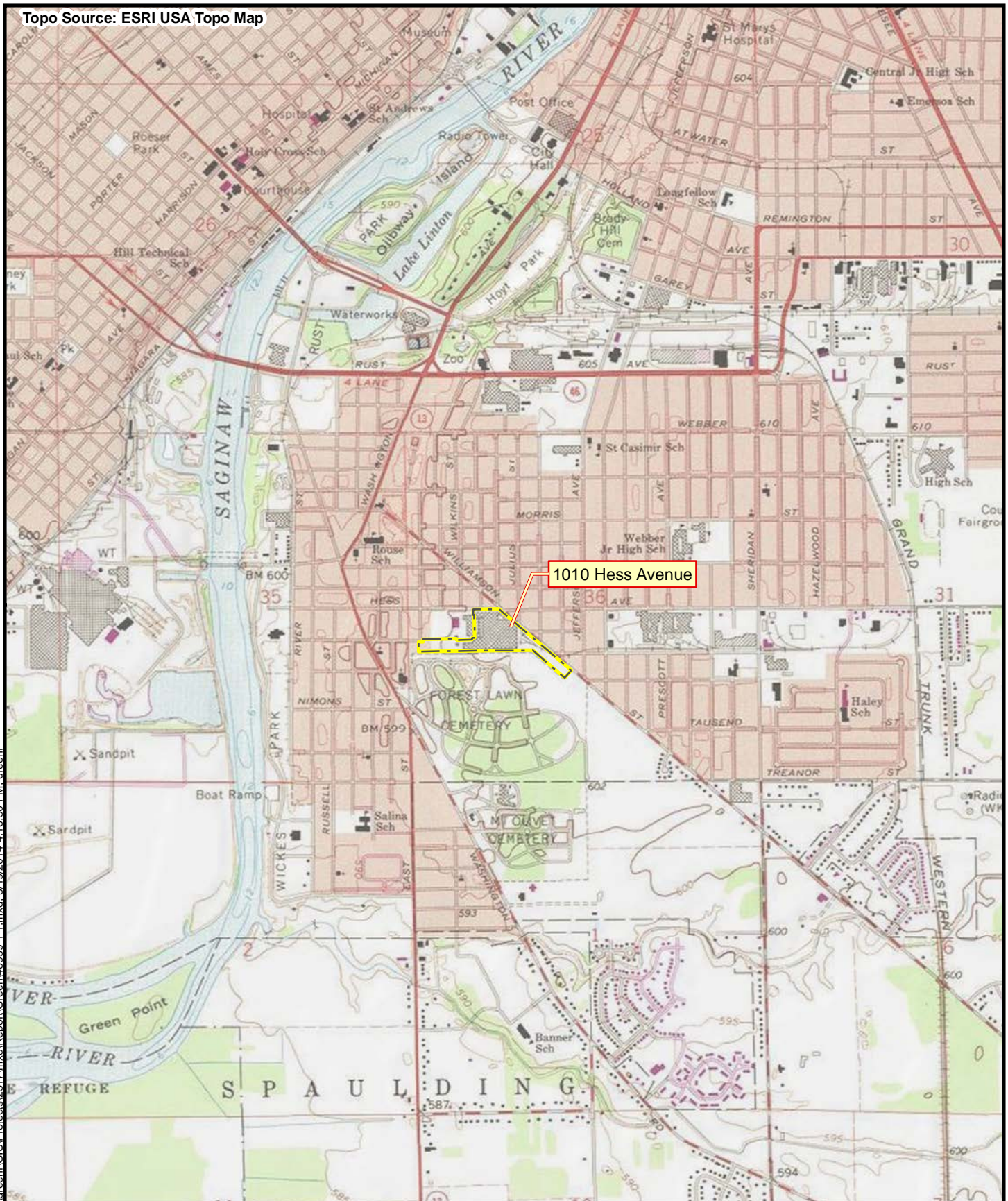
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## FIGURES

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Topo Source: ESRI USA Topo Map



## Legend

 Site Boundary

0 2,000  
1:24,000 Feet



Prepared for:  
**U.S. EPA REGION V**

Contract No.: EP-S5-06-04  
TDD: S05-0001-1404-004  
DCN: 2317-2A-BLUO



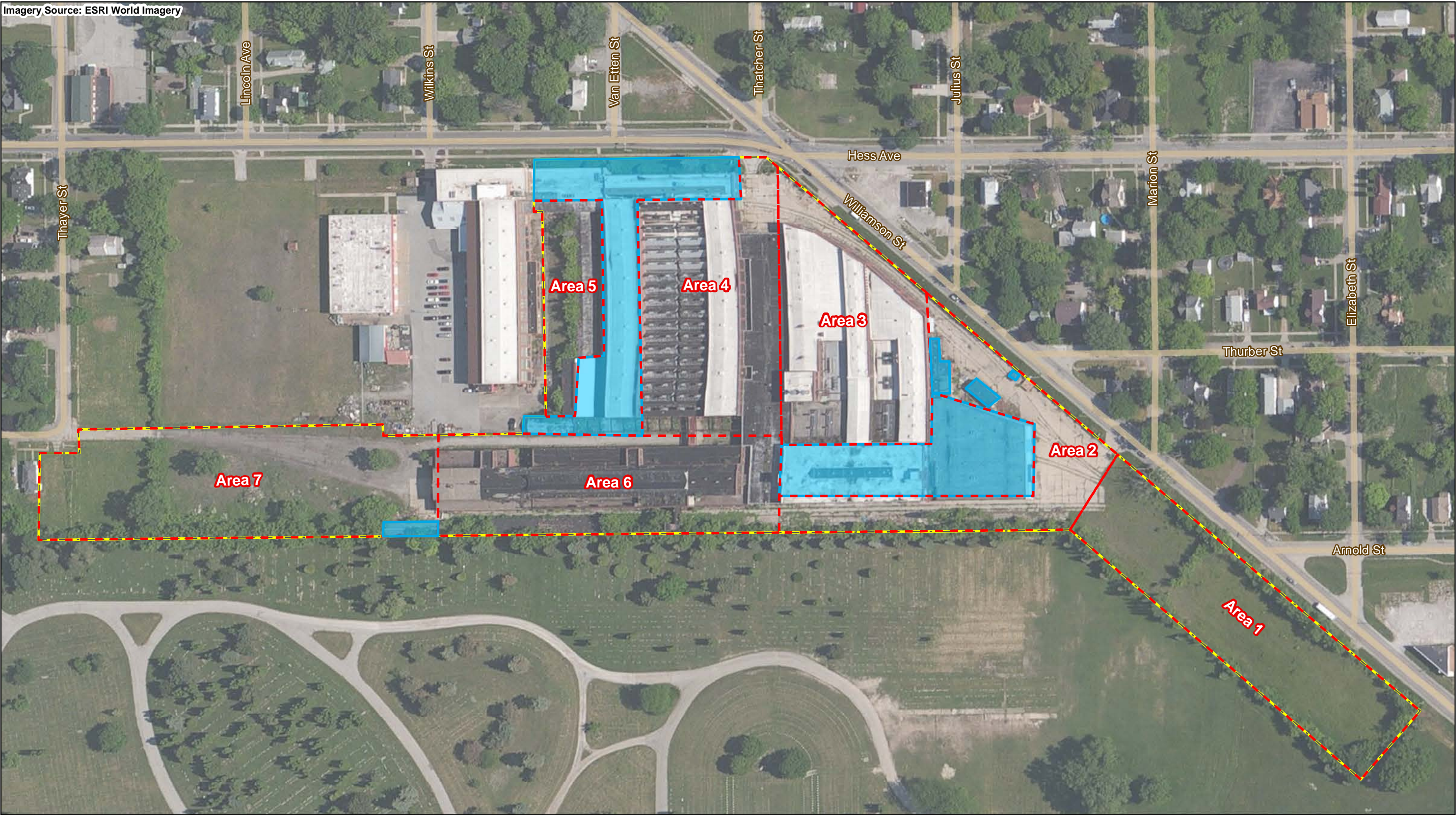
Prepared By:  
**WESTON SOLUTIONS, INC**

6779 Engle Road, Suite I  
Middleburg Heights, OH 44130

## Figure 1

Site Location Map  
Baker Perkins Site  
Saginaw, Saginaw County, Michigan





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**Legend**


- Investigation Areas
- Partially Intact Buildings
- Site Boundary

0 150 Feet

1:1,800

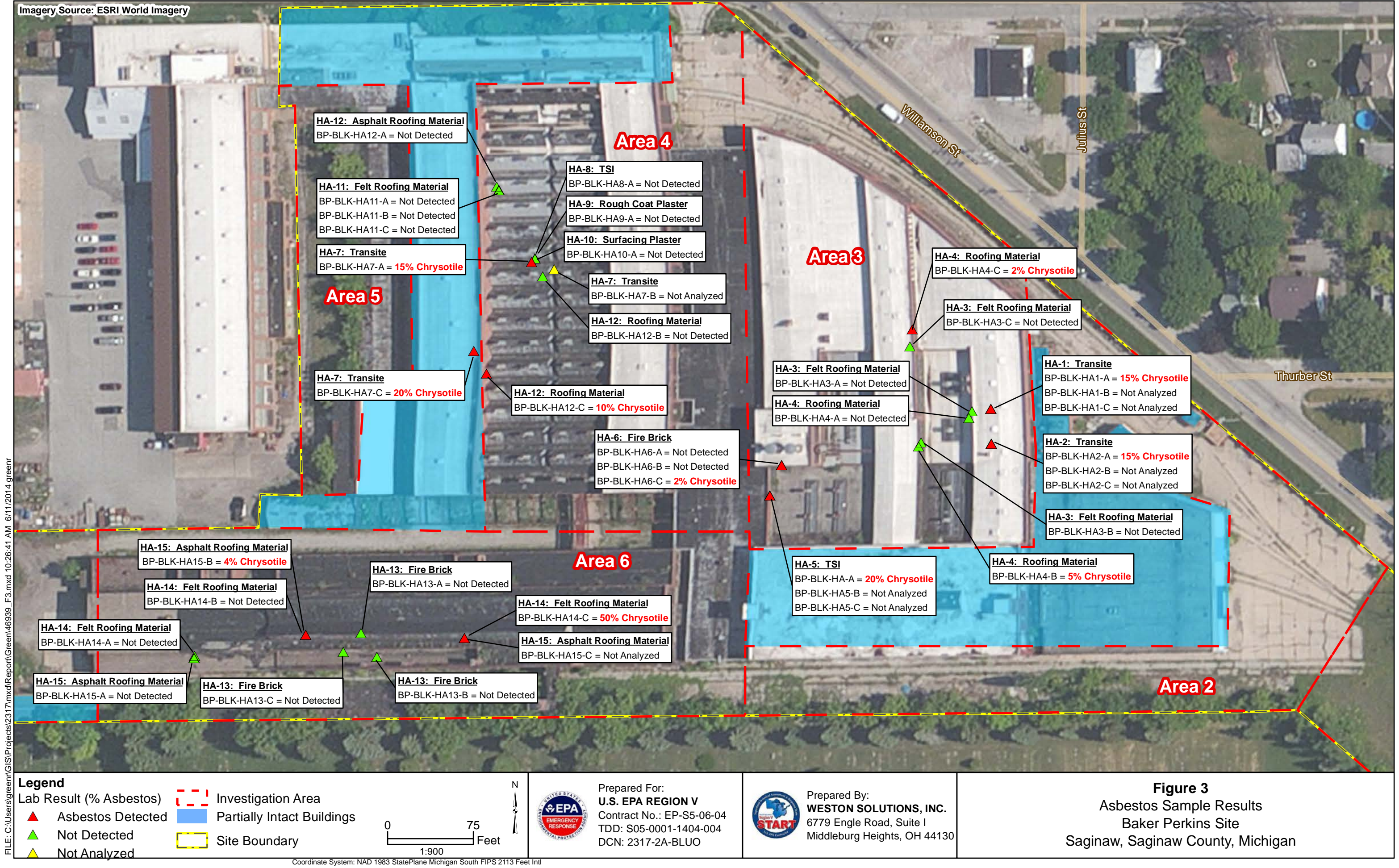
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**WESTON SOLUTIONS, INC.**  
6779 Engle Road, Suite I  
Middleburg Heights, OH 44130

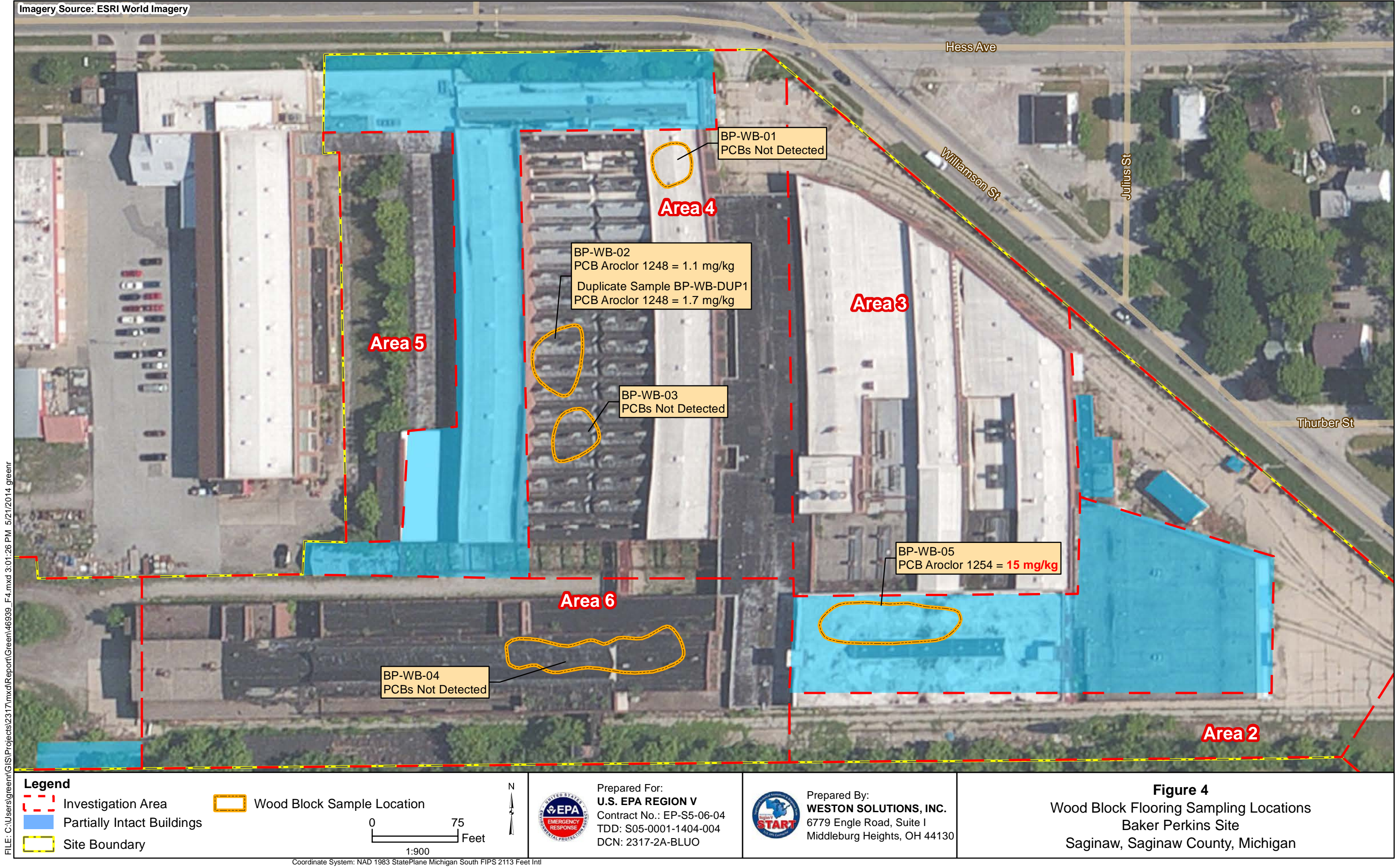
**Figure 2**  
Site Features Map  
Baker Perkins Site  
Saginaw, Saginaw County, Michigan



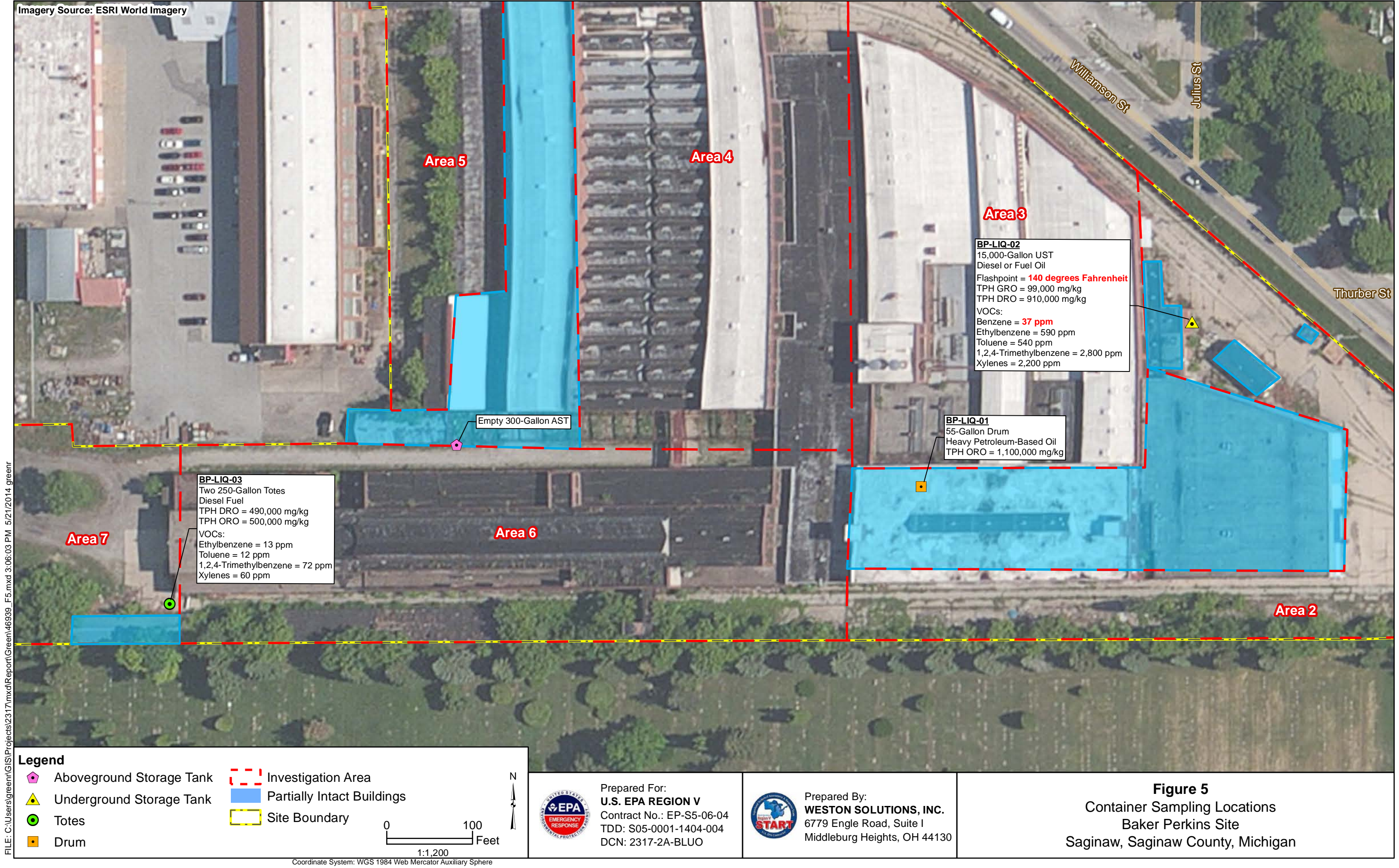


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## TABLES

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**Table 1**  
**Asbestos Bulk Sample Analytical Results**  
**Baker Perkins Site**  
**Saginaw, Saginaw County, Michigan**

HA No.	Site Area	Sample ID No.	Building Material	Result (% Asbestos)	Friable	NESHAP Classification
HA-1	Area 3	BP-BLK-HA1-A	Transite	15	No	RACM
		BP-BLK-HA1-B		Not Analyzed		
		BP-BLK-HA1-C		Not Analyzed		
HA-2		BP-BLK-HA2-A	Transite	15	No	RACM
		BP-BLK-HA2-B		Not Analyzed		
		BP-BLK-HA2-C		Not Analyzed		
HA-3		BP-BLK-HA3-A	Felt Roofing Material	ND	No	Not Regulated
		BP-BLK-HA3-B		ND		
		BP-BLK-HA3-C		ND		
HA-4		BP-BLK-HA4-A	Roofing Material	ND	No	Non-friable Category I ACM
		BP-BLK-HA4-B		5		
		BP-BLK-HA4-C		2		
HA-5		BP-BLK-HA5-A	TSI	20	Yes	RACM
		BP-BLK-HA5-B		Not Analyzed		
		BP-BLK-HA5-C		Not Analyzed		
HA-6		BP-BLK-HA6-A	Fire Brick	ND	Yes	RACM
		BP-BLK-HA6-B		ND		
		BP-BLK-HA6-C		2		
HA-7	Area 4	BP-BLK-HA7-A	Transite	15	No	RACM
		BP-BLK-HA7-B		Not Analyzed		
		BP-BLK-HA7-C		20		
HA-8		BP-BLK-HA8-A	TSI	ND	Yes	Not Regulated
HA-9		BP-BLK-HA9-A	Rough Coat Plaster	ND	No	Not Regulated
HA-10		BP-BLK-HA10-A	Surfacing Plaster	ND	No	Not Regulated
HA-11		BP-BLK-HA11-A	Felt Roofing Material	ND	No	Not Regulated
		BP-BLK-HA11-B		ND		
		BP-BLK-HA11-C		ND		
HA-12		BP-BLK-HA12-A	Asphalt Roofing Material	ND	No	Non-friable Category I ACM
		BP-BLK-HA12-B		ND		
		BP-BLK-HA12-C		10		
HA-13	Area 6	BP-BLK-HA13-A	Fire Brick	ND	Yes	Not Regulated
		BP-BLK-HA13-B		ND		
		BP-BLK-HA13-C		ND		
HA-14		BP-BLK-HA14-A	Felt Roofing Material	ND	No	Non-friable Category I ACM
		BP-BLK-HA14-B		ND		
		BP-BLK-HA14-C		50		
HA-15		BP-BLK-HA15-A	Asphalt Roofing Material	ND	No	Non-friable Category I ACM
		BP-BLK-HA15-B		4		
		BP-BLK-HA15-C		Not Analyzed		

Notes:

**Bold results indicate detected compounds.**

Highlighted results indicate ACM that poses an actual or potential risk of exposure to nearby human populations.

ACM = Asbestos-containing material

NESHAP = National Emissions Standards for Hazardous Air Pollutants

HA = Homogeneous area

RACM = Regulated asbestos-containing material

ID = Identification

TSI = Thermal system insulation

ND = Not detected

**Table 2**  
**Wood Block Flooring Sample Analytical Results**  
**Baker Perkins Site**  
**Saginaw, Saginaw County, Michigan**

Parameter	Analytical Method	Unit	Sample ID No.					
			BP-WB-01	BP-WB-02	BP-WB-DUP1*	BP-WB-03	BP-WB-04	BP-WB-05
PCBs								
Aroclor 1016	SW846-8082A	mg/kg	0.17 U	0.14 U	0.14 U	0.10 U	0.40 U	1.1 U
Aroclor 1221	SW846-8082A	mg/kg	0.17 U	0.14 U	0.14 U	0.10 U	0.40 U	1.1 U
Aroclor 1232	SW846-8082A	mg/kg	0.17 U	0.14 U	0.14 U	0.10 U	0.40 U	1.1 U
Aroclor 1242	SW846-8082A	mg/kg	0.17 U	0.14 U	0.14 U	0.10 U	0.40 U	1.1 U
Aroclor 1248	SW846-8082A	mg/kg	0.17 U	1.1	1.7	0.10 U	0.40 U	1.1 U
Aroclor 1254	SW846-8082A	mg/kg	0.17 U	3.5 U	3.5 U	10 U	1.2 U	15
Aroclor 1260	SW846-8082A	mg/kg	0.17 U	3.5 U	3.5 U	10 U	1.2 U	1.1 U
Aroclor 1268	SW846-8082A	mg/kg	0.17 U	3.5 U	3.5 U	10 U	1.2 U	1.1 U

Notes:

**Bold results indicate detected compounds.**

Highlighted results exceed applicable federal or state regulations.

\* = Duplicate of sample BP-WB-02

ID = Identification

PCB = Polychlorinated biphenyl

mg/kg = Milligram per kilogram

U = Not detected

**Table 3**  
**Container Sample Analytical Results**  
**Baker Perkins Site**  
**Saginaw, Saginaw County, Michigan**

Parameter	Analytical Method	Unit	Sample ID No.		
			BP-LIQ-01	BP-LIQ-02	BP-LIQ-03
Characteristic					
Flashpoint	1010	°F	> 200	140	> 200
Corrosivity	9040B	SU	7.1	6.6	7.2
TPH					
GRO C6-C12	8015M	mg/kg	770 U	99,000	870 U
DRO C10-C20	8015M	mg/kg	360,000 U	910,000	490,000
ORO C20-C34	8015M	mg/kg	1,100,000	380,000 U	500,000
PCBs					
Aroclor 1016	8082A	mg/kg	1.0 U	1.0 U	1.0 U
Aroclor 1221	8082A	mg/kg	1.0 U	1.0 U	1.0 U
Aroclor 1232	8082A	mg/kg	1.0 U	1.0 U	1.0 U
Aroclor 1242	8082A	mg/kg	1.0 U	1.0 U	1.0 U
Aroclor 1248	8082A	mg/kg	1.0 U	1.0 U	1.0 U
Aroclor 1254	8082A	mg/kg	1.0 U	1.0 U	1.0 U
Aroclor 1260	8082A	mg/kg	1.0 U	1.0 U	1.0 U
Aroclor 1268	8082A	mg/kg	1.0 U	1.0 U	1.0 U
Total Metals					
Aluminum	6010B	mg/kg	110 U	110 U	100 U
Antimony	6010B	mg/kg	8.6 U	8.4 U	8.1 U
Arsenic	6010B	mg/kg	4.3 U	4.2 U	4.1 U
Barium	6010B	mg/kg	2.2 U	2.1 U	2.0 U
Beryllium	6010B	mg/kg	1.1 U	1.1 U	1.0 U
Cadmium	6010B	mg/kg	1.1 U	1.1 U	1.0 U
Calcium	6010B	mg/kg	220 U	110 U	100 U
Chromium	6010B	mg/kg	2.2 U	2.1 U	2.0 U
Cobalt	6010B	mg/kg	2.2 U	2.1 U	2.0 U
Copper	6010B	mg/kg	26.3	11 U	10 U
Iron	6010B	mg/kg	30.6	21 U	20 U
Lead	6010B	mg/kg	9.54	4.2 U	4.1 U
Magnesium	6010B	mg/kg	110 U	110 U	100 U
Manganese	6010B	mg/kg	3.62	2.1 U	2.0 U
Mercury	7471B	mg/kg	0.096 U	0.093 U	0.070 U
Nickel	6010B	mg/kg	1.1 U	1.1 U	1.0 U
Potassium	6010B	mg/kg	140 U	110 U	100 U
Selenium	6010B	mg/kg	11 U	11 U	10 U
Silver	6010B	mg/kg	2.2 U	2.1 U	2.0 U
Sodium	6010B	mg/kg	288	200	207
Thallium	6010B	mg/kg	4.3 U	4.2 U	4.1 U
Vanadium	6010B	mg/kg	11 U	11 U	10 U
Zinc	6010B	mg/kg	218	13.1	13.8
Total VOCs					
Acetone	8260A	µg/kg	76,000 U	79,000 U	73,000 U
Acrolein	8260A	µg/kg	38,000 U	40,000 U	37,000 U
Acrylonitrile	8260A	µg/kg	38,000 U	40,000 U	37,000 U
Benzene	8260A	µg/kg	7,600 U	37,000	7,300 U
Bromochloromethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Bromodichloromethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Bromoform	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Bromomethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Carbon disulfide	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Carbon tetrachloride	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Chlorobenzene	8260A	µg/kg	7,600 U	7,900 U	7,300 U



**Table 3**  
**Container Sample Analytical Results**  
**Baker Perkins Site**  
**Saginaw, Saginaw County, Michigan**

Parameter	Analytical Method	Unit	Sample ID No.		
			BP-LIQ-01	BP-LIQ-02	BP-LIQ-03
Chloroethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Chloroform	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Chloromethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Dibromochloromethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,1-Dichloroethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,2-Dichloroethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,1-Dichloroethene	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,2-Dichloropropane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
cis-1,2-Dichloroethene	8260A	µg/kg	7,600 U	7,900 U	7,300 U
trans-1,2-Dichloroethene	8260A	µg/kg	7,600 U	7,900 U	7,300 U
cis-1,3-Dichloropropene	8260A	µg/kg	7,600 U	7,900 U	7,300 U
trans-1,3-Dichloropropene	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Ethylbenzene	8260A	µg/kg	7,600 U	<b>590,000</b>	<b>13,000</b>
2-Hexanone	8260A	µg/kg	38,000 U	40,000 U	37,000 U
n-Hexane	8260A	µg/kg	76,000 U	79,000 U	73,000 U
Methylene chloride	8260A	µg/kg	38,000 U	40,000 U	37,000 U
Methyl ethyl ketone	8260A	µg/kg	38,000 U	40,000 U	37,000 U
Methyl methacrylate	8260A	µg/kg	7,600 U	7,900 U	7,300 U
4-Methyl-2-pentanone	8260A	µg/kg	38,000 U	40,000 U	37,000 U
Methyl tert-butyl ether	8260A	µg/kg	7,600 U	7,900 U	7,300 U
2-Nitropropane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Pentachloroethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Propionitrile	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Styrene	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,1,1,2-Tetrachloroethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,1,2,2-Tetrachloroethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Tetrachloroethene	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Toluene	8260A	µg/kg	7,600 U	<b>540,000</b>	<b>12,000</b>
1,2,4-Trichlorobenzene	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,1,1-Trichloroethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Trichloroethene	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Trichlorofluoromethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,2,3-Trichloropropane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,1,2 Trichlorotrifluoroethane	8260A	µg/kg	7,600 U	7,900 U	7,300 U
1,2,4-Trimethylbenzene	8260A	µg/kg	7,600 U	<b>2,800,000</b>	<b>72,000</b>
Vinyl acetate	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Vinyl chloride	8260A	µg/kg	7,600 U	7,900 U	7,300 U
Xylenes (Total)	8260A	µg/kg	23,000 U	<b>2,200,000</b>	<b>60,000</b>
<b>Total SVOCs</b>					
Acenaphthene	8270C	µg/kg	440,000 U	<b>76,000</b>	500,000 U
Acenaphthylene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Anthracene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Benzo(a)anthracene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Benzo(a)pyrene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Benzo(b)fluoranthene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Benzo(g,h,i)perylene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Benzo(k)fluoranthene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
bis(2-Chloroethoxy)methane	8270C	µg/kg	440,000 U	480,000 U	500,000 U
bis(2-Chloroethyl)ether	8270C	µg/kg	440,000 U	480,000 U	500,000 U
bis(2-Chloroisopropyl)ether	8270C	µg/kg	440,000 U	480,000 U	500,000 U
bis(2-Ethylhexyl)phthalate	8270C	µg/kg	440,000 U	480,000 U	500,000 U
4-Bromo(phenylphenyl)ether	8270C	µg/kg	440,000 U	480,000 U	500,000 U

**Table 3**  
**Container Sample Analytical Results**  
**Baker Perkins Site**  
**Saginaw, Saginaw County, Michigan**

Parameter	Analytical Method	Unit	Sample ID No.		
			BP-LIQ-01	BP-LIQ-02	BP-LIQ-03
Butyl benzyl phthalate	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Carbazole	8270C	µg/kg	440,000 U	480,000 U	500,000 U
4-Chloroaniline	8270C	µg/kg	440,000 U	<b>1,900,000</b>	500,000 U
4-Chloro(phenylphenyl)ether	8270C	µg/kg	440,000 U	480,000 U	500,000 U
2-Chloronaphthalene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Chrysene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Dibenz(a,h)anthracene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Dibenzofuran	8270C	µg/kg	440,000 U	480,000 U	500,000 U
di-n-butyl Phthalate	8270C	µg/kg	440,000 U	480,000 U	500,000 U
1,2-Dichlorobenzene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
1,3-Dichlorobenzene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
1,4-Dichlorobenzene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
3,3-Dichlorobenzidine	8270C	µg/kg	880,000 U	960,000 U	1,000,000 U
Diethyl phthalate	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Dimethyl phthalate	8270C	µg/kg	440,000 U	480,000 U	500,000 U
2,6-Dinitrotoluene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
2,4-Dinitrotoluene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Di-n-octylphthalate	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Diphenylamine	8270C	µg/kg	440,000 U	480,000 U	500,000 U
1,2-Diphenylhydrazine	8270C	µg/kg	2,200,000 U	2,400,000 U	2,500,000 U
Fluoranthene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Fluorene	8270C	µg/kg	440,000 U	<b>840,000</b>	500,000 U
Hexachlorobenzene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Hexachlorobutadiene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Hexachlorocyclopentadiene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Hexachloroethane	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Indeno(1,2,3-cd)pyrene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Isophorone	8270C	µg/kg	440,000 U	480,000 U	500,000 U
2-Methylnaphthalene	8270C	µg/kg	440,000 U	<b>7,600,000</b>	500,000 U
Naphthalene	8270C	µg/kg	440,000 U	<b>1,900,000</b>	500,000 U
2-Nitroaniline	8270C	µg/kg	440,000 U	480,000 U	500,000 U
3-Nitroaniline	8270C	µg/kg	440,000 U	480,000 U	500,000 U
4-Nitroaniline	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Nitrobenzene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
N-Nitrosodi-n-propylamine	8270C	µg/kg	440,000 U	480,000 U	500,000 U
N-Nitrosodiphenylamine	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Phenanthrene	8270C	µg/kg	440,000 U	<b>1,200,000</b>	500,000 U
Pyrene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
1,2,4-Trichlorobenzene	8270C	µg/kg	440,000 U	480,000 U	500,000 U
4-Chloro-3-methylphenol	8270C	µg/kg	440,000 U	480,000 U	500,000 U
2-Chlorophenol	8270C	µg/kg	440,000 U	480,000 U	500,000 U
o-Cresol	8270C	µg/kg	440,000 U	480,000 U	500,000 U
m-Cresol	8270C	µg/kg	440,000 U	480,000 U	500,000 U
p-Cresol	8270C	µg/kg	440,000 U	480,000 U	500,000 U
2,4-Dimethylphenol	8270C	µg/kg	440,000 U	480,000 U	500,000 U
2,4-Dinitrophenol	8270C	µg/kg	2,200,000 U	2,400,000 U	2,500,000 U
4,6-Dinitro-2-methylphenol	8270C	µg/kg	2,200,000 U	2,400,000 U	2,500,000 U
2-Nitrophenol	8270C	µg/kg	440,000 U	480,000 U	500,000 U
4-Nitrophenol	8270C	µg/kg	2,200,000 U	2,400,000 U	2,500,000 U
N-Nitrosodimethylamine	8270C	µg/kg	440,000 U	480,000 U	500,000 U
Pentachlorophenol	8270C	µg/kg	2,200,000 U	2,400,000 U	2,500,000 U
Phenol	8270C	µg/kg	440,000 U	480,000 U	500,000 U

**Table 3**  
**Container Sample Analytical Results**  
**Baker Perkins Site**  
**Saginaw, Saginaw County, Michigan**

Parameter	Analytical Method	Unit	Sample ID No.		
			BP-LIQ-01	BP-LIQ-02	BP-LIQ-03
2,4,5-Trichlorophenol	8270C	µg/kg	440,000 U	480,000 U	500,000 U
2,4,6-Trichlorophenol	8270C	µg/kg	440,000 U	480,000 U	500,000 U

Notes:

**Bold results indicate detected compounds.**

Highlighted results exceed applicable federal or state regulations.

\*U.S. Environmental Protection Agency SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods"

µg/kg = Microgram per kilogram

DRO = Diesel-range organics

°F = Degree Fahrenheit

GRO = Gasoline-range organics

ID = Identification

mg/kg = Milligram per kilogram

ORO = Oil-range organics

PCB = Polychlorinated biphenyl

SU = Standard unit

SVOC = Semivolatile organic compound

TPH = Total petroleum hydrocarbons

U = Not detected above the reporting limit

VOC = Volatile organic compound

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**APPENDIX A**  
**PHOTOGRAPHIC DOCUMENTATION**

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**Site:** Baker Perkins  
**Photograph No.:** 1  
**Direction:** South  
**Subject:** Demolition debris piles in Area 3

**Date:** 4/22/2014  
**Photographer:** S. Stolz



**Site:** Baker Perkins  
**Photograph No.:** 2  
**Direction:** Southwest  
**Subject:** Demolition debris piles in Area 3

**Date:** 4/22/2014  
**Photographer:** S. Stolz





**Site:** Baker Perkins  
**Photograph No.:** 3  
**Direction:** West  
**Subject:** Demolition debris piles in Area 6

**Date:** 4/22/2014  
**Photographer:** S. Stolz



**Site:** Baker Perkins  
**Photograph No.:** 4  
**Direction:** South  
**Subject:** Demolition debris piles in Area 4

**Date:** 4/22/2014  
**Photographer:** S. Stolz



**Site:** Baker Perkins  
**Photograph No.:** 5  
**Direction:** Southeast  
**Subject:** Demolition debris piles in Area 4

**Date:** 4/22/2104  
**Photographer:** S. Stolz



**Site:** Baker Perkins  
**Photograph No.:** 6  
**Direction:** Southeast  
**Subject:** Staged scrap metal

**Date:** 4/22/2014  
**Photographer:** A. Kiel





**Site:** Baker Perkins

**Photograph No.:** 7

**Direction:** Not applicable (NA)

**Subject:** Bulk sample BP-BLK-HA1 of asbestos Transite fragments in Area 3

**Date:** 4/22/2014

**Photographer:** A. Kiel



**Site:** Baker Perkins

**Photograph No.:** 8

**Direction:** East

**Subject:** Asbestos Transite fragments in Area 3

**Date:** 4/22/2014

**Photographer:** A. Kiel





**Site:** Baker Perkins

**Photograph No.:** 9

**Direction:** Southeast

**Subject:** Asbestos Transite fragments in Area 3

**Date:** 4/22/2014

**Photographer:** A. Kiel



**Site:** Baker Perkins

**Photograph No.:** 10

**Direction:** NA

**Subject:** Bulk sample BP-BLK-HA2 of asbestos Transite fragments in Area 3

**Date:** 4/22/2014

**Photographer:** A. Kiel





**Site:** Baker Perkins

**Photograph No.:** 11

**Direction:** NA

**Subject:** Bulk sample BP-BLK-HA5 of asbestos TSI in Area 3

**Date:** 4/22/2014

**Photographer:** A. Kiel



**Site:** Baker Perkins

**Photograph No.:** 12

**Direction:** North

**Subject:** ACWM from BP-BLK-HA5 of asbestos TSI in Area 3

**Date:** 4/22/2014

**Photographer:** A. Kiel





**Site:** Baker Perkins

**Photograph No.:** 13

**Direction:** NA

**Subject:** Bulk sample BP-BLK-HA6 of asbestos fire brick in Area 3

**Date:** 4/22/2014

**Photographer:** A. Kiel



**Site:** Baker Perkins

**Photograph No.:** 14

**Direction:** Northeast

**Subject:** ACWM from BP-BLK-HA6 of asbestos fire bricks in Area 3

**Date:** 4/22/2014

**Photographer:** A. Kiel





**Site:** Baker Perkins

**Photograph No.:** 15

**Direction:** NA

**Subject:** Bulk sample BP-BLK-HA7 of asbestos Transite fragments in Area 4

**Date:** 4/22/2014

**Photographer:** A. Kiel



**Site:** Baker Perkins

**Photograph No.:** 16

**Direction:** East

**Subject:** Area 4 location from which wood block flooring sample BP-WB-01 was collected

**Date:** 4/23/2014

**Photographer:** S. Stolz





**Site:** Baker Perkins

**Photograph No.:** 17

**Date:** 4/23/2014

**Direction:** West

**Photographer:** A. Kiel

**Subject:** Area 4 location from which wood block flooring sample BP-WB-02 was collected



**Site:** Baker Perkins

**Photograph No.:** 18

**Date:** 4/23/2014

**Direction:** Southwest

**Photographer:** A. Kiel

**Subject:** Area 4 location from which wood block flooring sample BP-WB-03 was collected





**Site:** Baker Perkins

**Photograph No.:** 19

**Direction:** West

**Subject:** Area 6 location from which wood block flooring sample BP-WB-04 was collected

**Date:** 4/23/2104

**Photographer:** S. Stolz



**Site:** Baker Perkins

**Photograph No.:** 20

**Direction:** East

**Subject:** Area from which wood block flooring sample BP-WB-05 was collected from inside building south of Area 3

**Date:** 4/23/2104

**Photographer:** A. Kiel



**Site:** Baker Perkins

**Photograph No.:** 21

**Date:** 4/23/2104

**Direction:** South

**Photographer:** T. Edwards

**Subject:** Oil sample BP-LIQ-01 collected from plastic drum inside building south of Area 3



**Site:** Baker Perkins

**Photograph No.:** 22

**Date:** 4/23/2014

**Direction:** South

**Photographer:** T. Edwards

**Subject:** Small containers and secondary containment in building south of Area 3





**Site:** Baker Perkins

**Photograph No.:** 23

**Direction:** West

**Subject:** Oil sample BP-LIQ-02 collected from UST located at northwest corner of Area 2.

**Date:** 4/23/2014

**Photographer:** T. Edwards



**Site:** Baker Perkins

**Photograph No.:** 24

**Direction:** North

**Subject:** AST at northern edge of Area 5

**Date:** 4/23/2014

**Photographer:** T. Edwards





**Site:** Baker Perkins

**Photograph No.:** 25

**Direction:** East

**Subject:** Oil sample BP-LIQ-03 collected from two 250-gallon totes inside building at southeast corner of Area 7

**Date:** 4/23/2014

**Photographer:** T. Edwards



**Site:** Baker Perkins

**Photograph No.:** 26

**Direction:** North

**Subject:** Three 10-gallon containers inside building at southeast corner of Area 7

**Date:** 4/23/2014

**Photographer:** T. Edwards

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**APPENDIX B**

**LABORATORY ANALYTICAL REPORTS AND  
DATA VALIDATION REPORT**

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**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (800) 220-3675 / (856) 786-5974

<http://www.EMSL.com>[cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

EMSL Order: 041411466

CustomerID: WSOL72

CustomerPO:

ProjectID:

Attn: **Lisa Graczyk**  
**Weston Solutions, Inc.**  
**20 North Wacker Drive**  
**Suite 2035**  
**Chicago, IL 60606**

Phone: (312) 424-3300  
Fax: (312) 424-3330  
Received: 04/28/14 9:20 AM  
Analysis Date: 4/29/2014  
Collected: 4/22/2014

Project: **Baker Perkins**

**Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method,**  
**Revision 3, Issue 2, 8/15/94\***

Sample	Location	Sample Date	Volume (liters)	Fibers	Fields	LOD (fib/cc)	Fibers/ mm <sup>2</sup>	Fibers/ cc	Notes
BP-AIR-01 041411466-0001	Personnel air sample- assessment	4/22/2014	1232.00	8	100	0.002	10.2	0.003	
BP-AIR-FB1 041411466-0002	Field blank 1	4/22/2014		<5.5	100		<7.01		Field Blank
BP-AIR-FB2 041411466-0003	Field blank 2	4/22/2014		<5.5	100		<7.01		Field Blank

The results reported have been blank corrected as applicable.

Analyst(s)

Susan Muir (3)

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

Limit of detection is 7 fibers/mm<sup>2</sup>. Intra-laboratory Sr values: 5-20 fibers = 0.31, 21-50 fibers = 0.30, 51-100 fibers = 0.25. Inter-laboratory Sr values (Average of EMSL round robin data) = 0.29. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. EMSL is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. Results have been blank corrected as applicable. The results in this report meet all requirements of the NELAC standards unless otherwise noted. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NYS ELAP 10872, AIHA-LAP, LLC-IHLAP Accredited #100194, NJ DEP 03036, PA ID# 68-00367

Initial report from 04/29/2014 21:22:02



# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077  
Phone/Fax: (800) 220-3675 / (856) 786-5974  
<http://www.EMSL.com> / [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order ID: 041411418  
Customer ID: WSOL72  
Customer PO:  
Project ID:

**Attn:** Lisa Graczyk  
Weston Solutions, Inc.  
20 North Wacker Drive  
Suite 2035  
Chicago, IL 60606

**Phone:** (312) 424-3300  
**Fax:** (312) 424-3330  
**Collected:** 4/22/2014  
**Received:** 4/28/2014  
**Analyzed:** 5/04/2014

**Proj:** BAKER PERKINS

## Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method via Polarized Light Microscopy

**Client Sample ID:** BP-BLK-HA1-A

**Lab Sample ID:** 041411418-0001

**Sample Description:** TRANSITE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Gray/White	0%	85%	15% Chrysotile	

**Client Sample ID:** BP-BLK-HA1-B

**Lab Sample ID:** 041411418-0002

**Sample Description:** TRANSITE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014				Stop Positive (Not Analyzed)	

**Client Sample ID:** BP-BLK-HA1-C

**Lab Sample ID:** 041411418-0003

**Sample Description:** TRANSITE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014				Stop Positive (Not Analyzed)	

**Client Sample ID:** BP-BLK-HA2-A

**Lab Sample ID:** 041411418-0004

**Sample Description:** TRANSITE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	White	0%	85%	15% Chrysotile	

**Client Sample ID:** BP-BLK-HA2-B

**Lab Sample ID:** 041411418-0005

**Sample Description:** TRANSITE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014				Stop Positive (Not Analyzed)	

**Client Sample ID:** BP-BLK-HA2-C

**Lab Sample ID:** 041411418-0006

**Sample Description:** TRANSITE

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014				Stop Positive (Not Analyzed)	

**Client Sample ID:** BP-BLK-HA3-A

**Lab Sample ID:** 041411418-0007

**Sample Description:** ROOF MATERIAL- FELT

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Black	35%	65%	None Detected	
TEM Grav. Reduction	5/04/2014	Black	0.0%	100%	<0.25% Chrysotile	



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EMSL Order ID: 041411418  
Customer ID: WSOL72  
Customer PO:  
Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method via Polarized Light Microscopy

<b>Client Sample ID:</b>		BP-BLK-HA3-B		<b>Lab Sample ID:</b> 041411418-0008		
<b>Sample Description:</b>		ROOF MATERIAL- FELT				
<b>TEST</b>	<b>Analyzed Date</b>	<b>Color</b>	<b>Non-Asbestos</b>		<b>Asbestos</b>	<b>Comment</b>
			<b>Fibrous</b>	<b>Non-Fibrous</b>		
PLM	4/29/2014	Black	35%	65%	None Detected	
TEM Grav. Reduction	5/04/2014	Black	0.0%	100%	<0.25% Chrysotile	
<b>Client Sample ID:</b>		BP-BLK-HA3-C		<b>Lab Sample ID:</b> 041411418-0009		
<b>Sample Description:</b>		ROOF MATERIAL- FELT				
<b>TEST</b>	<b>Analyzed Date</b>	<b>Color</b>	<b>Non-Asbestos</b>		<b>Asbestos</b>	<b>Comment</b>
			<b>Fibrous</b>	<b>Non-Fibrous</b>		
PLM	4/30/2014	Black	40%	60%	None Detected	
TEM Grav. Reduction	5/04/2014	Black	0.0%	100%	<0.25% Chrysotile	
<b>Client Sample ID:</b>		BP-BLK-HA4-A-Tar		<b>Lab Sample ID:</b> 041411418-0010		
<b>Sample Description:</b>		ROOF MATERIAL				
<b>TEST</b>	<b>Analyzed Date</b>	<b>Color</b>	<b>Non-Asbestos</b>		<b>Asbestos</b>	<b>Comment</b>
			<b>Fibrous</b>	<b>Non-Fibrous</b>		
PLM	4/29/2014	Black	0%	100%	None Detected	
<b>Client Sample ID:</b>		BP-BLK-HA4-A-Tar Felt		<b>Lab Sample ID:</b> 041411418-0010A		
<b>Sample Description:</b>		ROOF MATERIAL				
<b>TEST</b>	<b>Analyzed Date</b>	<b>Color</b>	<b>Non-Asbestos</b>		<b>Asbestos</b>	<b>Comment</b>
			<b>Fibrous</b>	<b>Non-Fibrous</b>		
PLM	4/29/2014	Black	20%	80%	None Detected	
<b>Client Sample ID:</b>		BP-BLK-HA4-B		<b>Lab Sample ID:</b> 041411418-0011		
<b>Sample Description:</b>		ROOF MATERIAL				
<b>TEST</b>	<b>Analyzed Date</b>	<b>Color</b>	<b>Non-Asbestos</b>		<b>Asbestos</b>	<b>Comment</b>
			<b>Fibrous</b>	<b>Non-Fibrous</b>		
PLM	4/30/2014	Black/Silver	25%	70%	5% Chrysotile	
<b>Client Sample ID:</b>		BP-BLK-HA4-C		<b>Lab Sample ID:</b> 041411418-0012		
<b>Sample Description:</b>		ROOF MATERIAL				
<b>TEST</b>	<b>Analyzed Date</b>	<b>Color</b>	<b>Non-Asbestos</b>		<b>Asbestos</b>	<b>Comment</b>
			<b>Fibrous</b>	<b>Non-Fibrous</b>		
PLM	4/30/2014	Black/Silver	30%	68%	2% Chrysotile	
<b>Client Sample ID:</b>		BP-BLK-HA5-A		<b>Lab Sample ID:</b> 041411418-0013		
<b>Sample Description:</b>		TSI				
<b>TEST</b>	<b>Analyzed Date</b>	<b>Color</b>	<b>Non-Asbestos</b>		<b>Asbestos</b>	<b>Comment</b>
			<b>Fibrous</b>	<b>Non-Fibrous</b>		
PLM	4/29/2014	White	0%	80%	20% Amosite	
<b>Client Sample ID:</b>		BP-BLK-HA5-B		<b>Lab Sample ID:</b> 041411418-0014		
<b>Sample Description:</b>		TSI				
<b>TEST</b>	<b>Analyzed Date</b>	<b>Color</b>	<b>Non-Asbestos</b>		<b>Asbestos</b>	<b>Comment</b>
			<b>Fibrous</b>	<b>Non-Fibrous</b>		
PLM	4/29/2014					Stop Positive (Not Analyzed)



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EMSL Order ID: 041411418  
Customer ID: WSOL72  
Customer PO:  
Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method via Polarized Light Microscopy

Client Sample ID:		BP-BLK-HA5-C		Lab Sample ID: 041411418-0015		
Sample Description:		TSI				
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014		Stop Positive (Not Analyzed)			
Client Sample ID:		BP-BLK-HA6-A		Lab Sample ID: 041411418-0016		
Sample Description:		FIRE BRICK				
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Tan	0%	100%	None Detected	
Client Sample ID:		BP-BLK-HA6-B		Lab Sample ID: 041411418-0017		
Sample Description:		FIRE BRICK				
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Tan	0%	100%	None Detected	
Client Sample ID:		BP-BLK-HA6-C		Lab Sample ID: 041411418-0018		
Sample Description:		FIRE BRICK				
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Gray/Tan	0%	98%	2% Amosite	Possible contamination from other attached material
Client Sample ID:		BP-BLK-HA7-A		Lab Sample ID: 041411418-0019		
Sample Description:		TRANSITE				
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Gray/White	0%	85%	15% Chrysotile	
Client Sample ID:		BP-BLK-HA7-B		Lab Sample ID: 041411418-0020		
Sample Description:		TRANSITE				
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014		Stop Positive (Not Analyzed)			
Client Sample ID:		BP-BLK-HA7-C		Lab Sample ID: 041411418-0021		
Sample Description:		TRANSITE				
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Gray	0%	80%	20% Chrysotile	
Client Sample ID:		BP-BLK-HA8-A		Lab Sample ID: 041411418-0022		
Sample Description:		TSI				
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Gray	10%	90%	None Detected	



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## Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method via Polarized Light Microscopy

<b>Client Sample ID:</b> BP-BLK-HA9-A		<b>Lab Sample ID:</b> 041411418-0023A				
<b>Sample Description:</b> PLASTER- ROUGH						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Gray	2%	98%	None Detected	
<b>Client Sample ID:</b> BP-BLK-HA10-A		<b>Lab Sample ID:</b> 041411418-0024				
<b>Sample Description:</b> PLASTER- FINISH						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	White	0%	100%	None Detected	
<b>Client Sample ID:</b> BP-BLK-HA11-A		<b>Lab Sample ID:</b> 041411418-0025				
<b>Sample Description:</b> ROOF MATERIAL- FELT						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Black	15%	85%	None Detected	
TEM Grav. Reduction	5/04/2014	Black	0.0%	100%	<0.25% Chrysotile	
<b>Client Sample ID:</b> BP-BLK-HA11-B		<b>Lab Sample ID:</b> 041411418-0026				
<b>Sample Description:</b> ROOF MATERIAL- FELT						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Black	15%	85%	None Detected	
TEM Grav. Reduction	5/04/2014	Black	0.0%	100%	<0.25% Chrysotile	
<b>Client Sample ID:</b> BP-BLK-HA11-C		<b>Lab Sample ID:</b> 041411418-0027				
<b>Sample Description:</b> ROOF MATERIAL- FELT						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Black	40%	60%	None Detected	
TEM Grav. Reduction	5/04/2014	Black	0.0%	100%	None Detected	
<b>Client Sample ID:</b> BP-BLK-HA12-A		<b>Lab Sample ID:</b> 041411418-0028				
<b>Sample Description:</b> ROOF MATERIAL						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Black	30%	70%	None Detected	
<b>Client Sample ID:</b> BP-BLK-HA12-B		<b>Lab Sample ID:</b> 041411418-0029				
<b>Sample Description:</b> ROOF MATERIAL						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Black	25%	75%	None Detected	
<b>Client Sample ID:</b> BP-BLK-HA12-C		<b>Lab Sample ID:</b> 041411418-0030				
<b>Sample Description:</b> ROOF MATERIAL						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Black	10%	80%	10% Chrysotile	



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## Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method via Polarized Light Microscopy

**Client Sample ID:** BP-BLK-HA13-A

**Lab Sample ID:** 041411418-0031

**Sample Description:** FIRE BRICK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Tan	0%	100%	None Detected	

**Client Sample ID:** BP-BLK-HA13-B

**Lab Sample ID:** 041411418-0032

**Sample Description:** FIRE BRICK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Tan	0%	100%	None Detected	

**Client Sample ID:** BP-BLK-HA13-C

**Lab Sample ID:** 041411418-0033

**Sample Description:** FIRE BRICK

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Tan/White	0%	100%	None Detected	Recommend TEM

**Client Sample ID:** BP-BLK-HA14-A

**Lab Sample ID:** 041411418-0034

**Sample Description:** ROOF MATERIAL- FELT

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Black	15%	85%	None Detected	

**Client Sample ID:** BP-BLK-HA14-B

**Lab Sample ID:** 041411418-0035

**Sample Description:** ROOF MATERIAL- FELT

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Black	15%	85%	None Detected	

**Client Sample ID:** BP-BLK-HA14-C

**Lab Sample ID:** 041411418-0036

**Sample Description:** ROOF MATERIAL- FELT

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Black	0%	50%	50% Chrysotile	

**Client Sample ID:** BP-BLK-HA15-A-Roofing

**Lab Sample ID:** 041411418-0037

**Sample Description:** ROOF MATERIAL

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Black	20%	80%	None Detected	

**Client Sample ID:** BP-BLK-HA15-A-Insulation

**Lab Sample ID:** 041411418-0037A

**Sample Description:** ROOF MATERIAL

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Brown	90%	10%	None Detected	





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Project ID:

## Summary Test Report for Asbestos Analysis of Bulk Material via EPA 600/R-93/116 Method via Polarized Light Microscopy

**Client Sample ID:** BP-BLK-HA15-B

**Lab Sample ID:** 041411418-0038

**Sample Description:** ROOF MATERIAL

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014	Black	0%	96%	4% Chrysotile	

**Client Sample ID:** BP-BLK-HA15-C

**Lab Sample ID:** 041411418-0039

**Sample Description:** ROOF MATERIAL

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/29/2014				Stop Positive (Not Analyzed)	

**Client Sample ID:** BP-BLK-DUP-1

**Lab Sample ID:** 041411418-0040

**Sample Description:** DUPLICATE 1

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Gray	0%	80%	20% Chrysotile	

**Client Sample ID:** BP-BLK-DUP-2

**Lab Sample ID:** 041411418-0041

**Sample Description:** DUPLICATE 2

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Black	15%	80%	5% Chrysotile	

**Client Sample ID:** BP-BLK-DUP-3

**Lab Sample ID:** 041411418-0042

**Sample Description:** DUPLICATE 3

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Gray	0%	80%	20% Chrysotile	

**Client Sample ID:** BP-BLK-DUP-4

**Lab Sample ID:** 041411418-0043

**Sample Description:** DUPLICATE 4

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/30/2014	Tan	0%	100%	None Detected	Recommend TEM

### Analyst(s)

Chris Little	TEM Grav. Reduction	(6)
Frank Dicrescenzo	PLM	(1)
Juli Patel	PLM	(15)
Shane Feret	PLM	(21)

Stephen Siegel, CIH, Laboratory Manager  
or other Approved Signatory

Any questions please contact Steve Siegel.

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. This test report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. EMSL bears no responsibility for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples. PLM alone is not consistently reliable in detecting asbestos in floor coverings and similar NOBs

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036

Initial report from: 04/30/2014 15:27:41

**BAKER PERKINS SITE  
SAGINAW, SAGINAW COUNTY, MICHIGAN  
DATA VALIDATION REPORT**

**Date:** May 12, 2014

**Laboratory:** EA Group, Mentor, Ohio

**Laboratory Project #:** 1404-00451

**Data Validation Performed By:** Lisa Graczyk, Weston Solutions, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START)

**Weston Analytical Work Order #/TDD #:** 20405.016.001.2317.77/ S05-0001-1404-004

This data validation report has been prepared by WESTON START under the START III Region V contract. This report documents the data validation for three liquid samples and six wood block samples collected for the Baker Perkins Site that were analyzed for the following parameters and U.S. Environmental Protection Agency methods:

- Volatile Organic Compounds (VOC) by SW-846 Method 8260A
- Semivolatile Organic Carbons (SVOC) by SW-846 Method 8270C
- Polychlorinated Biphenyls (PCB) by SW-846 Method 8082A
- Total Petroleum Hydrocarbons (TPH) as Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Oil Range Organics (ORO) by SW-846 Method 8015M
- Metals by SW-846 Methods 6010B and 7471B
- Flashpoint by ASTM D93
- pH by SW-846 9045C

A level II data package was requested from EA Group. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidance for Superfund Organic Methods Data Review" dated June 2008 and "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2010. The Attachment contains the results summary sheets with the hand-written qualifiers applied during data validation.

## VOCs by SW-846 METHOD 8260A

### 1. Samples

The following table summarizes the samples for which this data validation is being conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Analyzed</b>
BP-LIQ-01	1404-00451-001	Liquid	4/23/2014	5/1/2014
BP-LIQ-02	1404-00451-002	Liquid	4/23/2014	5/1/2014
BP-LIQ-03	1404-00451-003	Liquid	4/23/2014	5/1/2014

### 2. Holding Times

The samples were analyzed within the required holding time limit of 14 days from sample collection.

### 3. Blanks

A method blank was analyzed with the VOC analyses and was free of VOCs above the reporting limits.

### 4. Surrogate Results

The surrogate recovery results were within the laboratory-established quality control (QC) limits.

### 5. Laboratory Control Sample (LCS) Results

The LCS and LCS duplicate (LCSD) recoveries and relative percent differences (RPD) were within laboratory QC limits.

### 6. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results

A site-specific MS and MSD were not analyzed with this work; therefore, matrix interferences could not be evaluated using the MS and MSD. No qualifications are required.

### 7. Overall Assessment

The VOC data are acceptable for use based on the information received.

## SVOCs by SW-846 METHOD 8270C

### 1. Samples

The following table summarizes the samples for which this data validation is being conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>
BP-LIQ-01	1404-00451-001	Liquid	4/23/2014	4/28/2014	4/30/2014
BP-LIQ-02	1404-00451-002	Liquid	4/23/2014	4/28/2014	4/30/2014
BP-LIQ-03	1404-00451-003	Liquid	4/23/2014	4/28/2014	4/30/2014

### 2. Holding Times

The samples were analyzed within the required holding time limit of 14 days from sample collection to extraction and 40 days from extraction to analysis.

### 3. Blanks

A method blank was analyzed with the SVOC analyses and was free of target compound contamination above the reporting limits.

### 4. Surrogate Results

The surrogate recoveries were within QC limits.

### 5. LCS Results

The percent recoveries for the LCS results were within the laboratory-established QC limits.

### 6. MS and MSD Results

A site-specific MS and MSD were not analyzed with this work; therefore, matrix interferences could not be evaluated using the MS and MSD. For the MS and MSD that were analyzed, the percent recoveries and RPDs were mostly within QC limits with some minor discrepancies. No qualification was warranted.

### 7. Overall Assessment

The SVOC data are acceptable for use based on the information received.

## PCBs by SW-846 METHOD 8082A

### 1. Samples

The following table summarizes the samples for which this data validation was conducted.

Samples	Lab ID	Matrix	Date Collected	Date Prepared	Date Analyzed
BP-LIQ-01	1404-00451-001	Liquid	4/23/2014	4/29/2014	4/29/2014
BP-LIQ-02	1404-00451-002	Liquid	4/23/2014	4/29/2014	4/29/2014
BP-LIQ-03	1404-00451-003	Liquid	4/23/2014	4/29/2014	4/29/2014
BP-WB-01	1404-00451-004	Wood	4/23/2014	4/28/2014	4/29/2014
BP-WB-02	1404-00451-005	Wood	4/23/2014	4/28/2014	4/29/2014
BP-WB-03	1404-00451-006	Wood	4/23/2014	4/28/2014	4/29/2014
BP-WB-04	1404-00451-007	Wood	4/23/2014	4/28/2014	4/29/2014
BP-WB-05	1404-00451-008	Wood	4/23/2014	4/28/2014	4/29/2014
BP-WB-DUP1	1404-00451-009	Wood	4/23/2014	4/28/2014	4/29/2014

### 2. Holding Times

The samples were analyzed within the required holding time limit of 14 days from sample collection to extraction and 40 days from extraction to analysis.

### 3. Blanks

A method blank was analyzed with the PCB analysis and was free of target compound contamination above the reporting limit.

### 4. Surrogates

In several samples, one of the two surrogates was outside QC limits; however, the other surrogate was within QC limits. No qualifications were applied.

### 5. LCS Results

The LCS and LCSD recoveries and RPDs were within the laboratory-established QC limits.

**6. MS and MSD Results**

A site-specific MS and MSD were not analyzed with this work; therefore, matrix interferences could not be evaluated using the MS and MSD. For the MS and MSD that were analyzed, the percent recoveries and RPDs were within QC limits.

**7. Field Duplicate Results**

Sample BP-WB-DUP1 is a field duplicate of sample BP-WB-02. The RPD for the detected PCB was less than 50 percent which is acceptable.

**8. Overall Assessment**

The PCB data are acceptable for use based on the information received.

**TPH by SW-846 METHOD 8015M**

**1. Samples**

The following table summarizes the samples for which this data validation was conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>
BP-LIQ-01	1404-00451-001	Liquid	4/23/2014	4/29/2014	4/30/2014
BP-LIQ-02	1404-00451-002	Liquid	4/23/2014	4/29/2014	4/30/2014
BP-LIQ-03	1404-00451-003	Liquid	4/23/2014	4/29/2014	4/30/2014

**2. Holding Times**

The samples were analyzed within the required holding time limit of 14 days from sample collection to extraction and 40 days from extraction to analysis.

**3. Blanks**

Method blanks were analyzed with the TPH analyses and were free of target compound contamination above the reporting limit.

**4. Surrogates**

In several instances, the surrogates were not adequately recovered due to high concentrations of target compounds requiring high sample dilutions. No qualifications are required in these instances.

**5. LCS Results**

The LCS and LCSD recoveries and RPDs were within the laboratory-established QC limits.

**6. MS and MSD Results**

A site-specific MS and MSD were not analyzed with this work; therefore, matrix interferences could not be evaluated using the MS and MSD. For the MS and MSD that were analyzed, the percent recoveries and RPDs were within QC limits.

**7. Overall Assessment**

The TPH data are acceptable for use based on the information received.

## **TOTAL METALS BY SW-846 METHODS 6010B AND 7471B**

### **1. Samples**

The following table summarizes the samples for which this data validation is being conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Analyzed</b>
BP-LIQ-01	1404-00451-001	Liquid	4/23/2014	4/29/2014 – 5/1/2014
BP-LIQ-02	1404-00451-002	Liquid	4/23/2014	4/29/2014 – 5/1/2014
BP-LIQ-03	1404-00451-003	Liquid	4/23/2014	4/29/2014 – 5/1/2014

### **2. Holding Times**

The samples were analyzed within the required holding time limit of 28 days from sample collection to analysis for mercury and 180 days from sample collection to analysis for all other metals.

### **3. Blank Results**

Method blanks were analyzed with the metals analysis. The blanks were free of target analyte contamination above the reporting limits.

### **4. LCS Results**

The LCS recoveries were within the laboratory-established QC limits.

### **5. MS and MSD Results**

A site-specific MS and MSD were not analyzed with this work; therefore, matrix interferences could not be evaluated using the MS and MSD. No qualifications were required.

### **6. Overall Assessment**

The metals data are acceptable for use based on the information received.



## **GENERAL CHEMISTRY PARAMETERS (Flashpoint by ASTM D93 and pH by 9045C)**

### **1. Samples**

The following table summarizes the samples for which this data validation is being conducted.

<b>Samples</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Analyzed</b>
BP-LIQ-01	1404-00451-001	Liquid	4/23/2014	5/2/2014 – 5/5/2014
BP-LIQ-02	1404-00451-002	Liquid	4/23/2014	5/2/2014 – 5/5/2014
BP-LIQ-03	1404-00451-003	Liquid	4/23/2014	5/2/2014 – 5/5/2014

### **2. Holding Times**

The methods state to analyze for flashpoint and pH as soon as possible. Because these samples were waste matrices consisting of oil, the holding times are acceptable.

### **3. Laboratory Duplicate Results**

A laboratory duplicate was analyzed with the pH analyses and the RPD was within QC limits.

### **4. Overall Assessment**

The flashpoint and pH data are acceptable for use based on the information received.

Data Validation Report  
Baker Perkins Site  
EA Group  
Laboratory Project #: 1404-00451

**ATTACHMENT**

**EA GROUP**  
**RESULTS SUMMARY**



## **Analytical Data Package**

Prepared for:

**Weston Solutions**  
20 North Wacker St., #1210  
Chicago, IL 60606

**Client Project:**  
Baker Perkins SA

**EA Group Workorder:**  
1404-00451

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## Analytical Results





Weston Solutions  
20 North Wacker St., #1210  
Chicago, IL 60606  
Lisa Graczyk

Client Project: Baker Perkins SA  
EA Group Workorder Number: 140400451  
Received on April 25, 2014

The following analytical report contains results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data has been found to be compliant with accepted laboratory protocol, except as noted in the QC narrative. Industrial hygiene reports, air and/or surface concentrations results are based upon sampling information provided by the client. Industrial hygiene results will not be blank corrected. Analyst initials of REF indicate analysis performed at a subcontract facility.

If you have questions, comments or require further assistance regarding this report, please contact your client services representative or one of the individuals listed below.

Data or reporting:

Debbie Lauer - Lab Manager  
dlauer@eagroupohio.com

Mike Herbert  
mherbert@eagroupohio.com

Sample tracking, supplies:

Lisa Foose - Sample Control  
sreceiving@eagroupohio.com

Invoice Related:

Bonnie Renbarger - Office Manager  
brenbarger@eagroupohio.com

Reproduction of this report is prohibited except in its entirety. Unless noted, soil, sludge and sediment results are reported on dry weight basis. The "Sample Reporting Limit" is based on the method used for analysis and does not refer to any regulatory limit. These results relate only to the items tested.



## **Laboratory Analytical Report**

### **Weston Solutions**

20 North Wacker St., #1210

Chicago, IL 60606

Attention:  
Lisa Graczyk

### **Client Project:**

Baker Perkins SA

### **EA Group Workorder:**

1404-00451

Deborah L. Lauer  
Laboratory Manager

May 6, 2014



Sample Receive Date 4/25/2014

Sample Listing

<u>EAG</u>		<u>Client</u>
<u>Sample Identification</u>		<u>Sample Identification</u>
140400451	- 001	BP-LIQ-01
140400451	- 003	BP-LIQ-03
140400451	- 005	BP-WB-02
140400451	- 007	BP-WB-04
140400451	- 009	BP-WB-DUP1

<u>EAG</u>		<u>Client</u>
<u>Sample Identification</u>		<u>Sample Identification</u>
140400451	- 002	BP-LIQ-02
140400451	- 004	BP-WB-01
140400451	- 006	BP-WB-03
140400451	- 008	BP-WB-05



# EA GROUP

Environmental Analysis  
and Management

## **Project Narrative 1404-00451**

All analyses performed by EA Group were done using established laboratory SOPs. Management has reviewed the data for compliance with the laboratory QA/QC plan and data have been found to be compliant with the laboratory protocols unless otherwise noted below. All results listed for this report relate only to the samples submitted on this work order.

The temperature of the sample(s) upon receipt was 5.9°C. Samples were received on wet ice.

### Organic Analyses

Due to the measurement of uncertainty associated with the methods and the need to perform large dilutions, the total amount of analyte found can exceed 100%.

### GC/MS Semi-Volatiles Analysis

The MS/MSD associated with Data Entry Batch 129136 was performed on a sample from a different project, 1404-00428-003, and was entered under Data Entry Batch 129137.

### PCB Analysis

The MS/MSD associated with Data Entry Batch 129179 was performed on a sample from a different project, 1404-00494-001, and was entered under Data Entry Batch 129219.

### Metals Analysis

The MS/MSD associated with Data Entry Batch 129161 was performed on a sample from a different project, 1404-00428-001, and was entered under Data Entry Batch 129143. Several elements recovered outside the control limits due to the non-homogeneity of the sample. A post digestion spike was analyzed.





## **Project Narrative 1404-00451**

### Misc. QC Comments

Percent Moisture is used to report results on a dry weight basis.

When necessary, reporting limits of individual samples may be raised due to high concentration of interfering compounds or target analytes, or quantity of sample available for analysis.

pH method note: If this analysis was performed in the laboratory, it may not meet the "immediate analysis" requirement that applies to most wastewater monitoring samples. In such cases, analysis for pH should be done at the time of sampling.

The results listed in this report relate only to the samples submitted to EA Group per the chain of custody.

### Data Flag Table

B	The method blank contained a standard laboratory contaminant (Methylene Chloride, Acetone, Hexane, Phthalates, etc.) above the standard laboratory method detection limit. If the analyte is present in the sample at a concentration up to ten times the blank level, the result is reported with a "B" indicating method blank contamination. Samples will be reported without a "B" if the analyte concentration in the sample is greater than ten times the blank level.
E	An analytical result marked with an "E" indicates the result reported is above the high end limit of the calibration curve and should be considered an estimated concentration.
DIL	Due to matrix interference or high analyte concentration, a dilution was required. The spikes and/or surrogates results could not be quantitated and therefore marked "DIL".
J	An analytical result marked with a "J" indicates the result reported was below the standard reporting limit and above the method detection limit. As the observed level approaches the MDL there is an increasing probability of a false positive response.
MI	Analytical results marked as "MI" indicate that due to inherent matrix interference, the result could not be quantitated.
#	Results flagged "#" indicate the reported result may be outside allowable permit levels as provided by the client, when applicable.
NA	A result or field marked as "NA" indicates that it was not applicable for this project.
Q	A quality control result flagged with a "Q" indicates the percent recovery was outside the acceptable range as determined by the laboratory.

\*\* Positive results for this analyte represent a probable combination of 3-Methylphenol (m-Cresol) and 4-Methylphenol (p-Cresol).



**EAG Workorder:** 1404-00451

**Client Project:** Baker Perkins SA

**Client ID:** BP-LIQ-01

**Date/Time Sampled:** 4/23/2014 / 0950

**Received:** 4/25/2014

**EAG ID:** 1404-00451-1

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Prep Date</u>	<u>Analysis Date</u>	<u>Time</u>	<u>Analyst</u>
Aluminum: SW846-6010B	7429-90-5	<110	110	mg/kg	4/28/2014	5/01/2014		CMB
Antimony: SW846-6010B	7440-36-0	<8.6	8.6	mg/kg	4/28/2014	5/01/2014		CMB
Arsenic: SW846-6010B	7440-38-2	<4.3	4.3	mg/kg	4/28/2014	5/01/2014		CMB
Barium: SW846-6010B	7440-39-3	<2.2	2.2	mg/kg	4/28/2014	5/01/2014		CMB
Beryllium: SW846-6010B	7440-41-7	<1.1	1.1	mg/kg	4/28/2014	5/01/2014		CMB
Cadmium: SW846-6010B	7440-43-9	<1.1	1.1	mg/kg	4/28/2014	5/01/2014		CMB
Calcium: SW846-6010B	7440-70-2	<220	220	mg/kg	4/28/2014	5/01/2014		CMB
Chromium: SW846-6010B	7440-47-3	<2.2	2.2	mg/kg	4/28/2014	5/01/2014		CMB
Cobalt: SW846-6010B	7440-48-4	<2.2	2.2	mg/kg	4/28/2014	5/01/2014		CMB
<b>Copper: SW846-6010B</b>	7440-50-8	<b>26.3</b>	11	mg/kg	4/28/2014	5/01/2014		CMB
<b>Iron: SW846-6010B</b>	7439-89-6	<b>30.6</b>	22	mg/kg	4/28/2014	5/01/2014		CMB
<b>Lead: SW846-6010B</b>	7439-92-1	<b>9.54</b>	4.3	mg/kg	4/28/2014	5/01/2014		CMB
Magnesium: SW846-6010B	7439-95-4	<110	110	mg/kg	4/28/2014	5/01/2014		CMB
<b>Manganese: SW846-6010B</b>	7439-96-5	<b>3.62</b>	2.2	mg/kg	4/28/2014	5/01/2014		CMB
Mercury: SW846-7471B	7439-97-6	<0.096	0.096	mg/kg	4/29/2014	4/29/2014		CMB
Nickel: SW846-6010B	7440-02-0	<1.1	1.1	mg/kg	4/28/2014	5/01/2014		CMB
Potassium: SW846-6010B	7440-09-7	<140	140	mg/kg	4/28/2014	4/29/2014		CMB
Selenium: SW846-6010B	7782-49-2	<11	11	mg/kg	4/28/2014	5/01/2014		CMB
Silver: SW846-6010B	7440-22-4	<2.2	2.2	mg/kg	4/28/2014	5/01/2014		CMB
<b>Sodium: SW846-6010B</b>	7440-23-5	<b>288</b>	110	mg/kg	4/28/2014	5/01/2014		CMB
Thallium: SW846-6010B	7440-28-0	<4.3	4.3	mg/kg	4/28/2014	5/01/2014		CMB
Vanadium: SW846-6010B	7440-62-2	<11	11	mg/kg	4/28/2014	5/01/2014		CMB
<b>Zinc: SW846-6010B</b>	7440-66-6	<b>218</b>	4.3	mg/kg	4/28/2014	5/01/2014		CMB
Flashpoint: ASTM D93		>200		degrees F		5/05/2014		REF
Corrosivity: SW846-9045C		7.1		pH units	5/02/2014	5/02/2014		SLD



**EAG Workorder:** 1404-00451

**Client Project:** Baker Perkins SA

**Client ID:** BP-LIQ-02

**Date/Time Sampled:** 4/23/2014 / 1005

**Received:** 4/25/2014

**EAG ID:** 1404-00451-2

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Prep Date</u>	<u>Analysis Date</u>	<u>Time</u>	<u>Analyst</u>
Aluminum: SW846-6010B	7429-90-5	<110	110	mg/kg	4/28/2014	5/01/2014		CMB
Antimony: SW846-6010B	7440-36-0	<8.4	8.4	mg/kg	4/28/2014	5/01/2014		CMB
Arsenic: SW846-6010B	7440-38-2	<4.2	4.2	mg/kg	4/28/2014	5/01/2014		CMB
Barium: SW846-6010B	7440-39-3	<2.1	2.1	mg/kg	4/28/2014	5/01/2014		CMB
Beryllium: SW846-6010B	7440-41-7	<1.1	1.1	mg/kg	4/28/2014	5/01/2014		CMB
Cadmium: SW846-6010B	7440-43-9	<1.1	1.1	mg/kg	4/28/2014	5/01/2014		CMB
Calcium: SW846-6010B	7440-70-2	<110	110	mg/kg	4/28/2014	5/01/2014		CMB
Chromium: SW846-6010B	7440-47-3	<2.1	2.1	mg/kg	4/28/2014	5/01/2014		CMB
Cobalt: SW846-6010B	7440-48-4	<2.1	2.1	mg/kg	4/28/2014	5/01/2014		CMB
Copper: SW846-6010B	7440-50-8	<11	11	mg/kg	4/28/2014	5/01/2014		CMB
Iron: SW846-6010B	7439-89-6	<21	21	mg/kg	4/28/2014	5/01/2014		CMB
Lead: SW846-6010B	7439-92-1	<4.2	4.2	mg/kg	4/28/2014	5/01/2014		CMB
Magnesium: SW846-6010B	7439-95-4	<110	110	mg/kg	4/28/2014	5/01/2014		CMB
Manganese: SW846-6010B	7439-96-5	<2.1	2.1	mg/kg	4/28/2014	5/01/2014		CMB
Mercury: SW846-7471B	7439-97-6	<0.093	0.093	mg/kg	4/29/2014	4/29/2014		CMB
Nickel: SW846-6010B	7440-02-0	<1.1	1.1	mg/kg	4/28/2014	5/01/2014		CMB
Potassium: SW846-6010B	7440-09-7	<110	110	mg/kg	4/28/2014	5/01/2014		CMB
Selenium: SW846-6010B	7782-49-2	<11	11	mg/kg	4/28/2014	5/01/2014		CMB
Silver: SW846-6010B	7440-22-4	<2.1	2.1	mg/kg	4/28/2014	5/01/2014		CMB
<b>Sodium: SW846-6010B</b>	7440-23-5	<b>200</b>	110	mg/kg	4/28/2014	5/01/2014		CMB
Thallium: SW846-6010B	7440-28-0	<4.2	4.2	mg/kg	4/28/2014	5/01/2014		CMB
Vanadium: SW846-6010B	7440-62-2	<11	11	mg/kg	4/28/2014	5/01/2014		CMB
<b>Zinc: SW846-6010B</b>	7440-66-6	<b>13.1</b>	4.2	mg/kg	4/28/2014	5/01/2014		CMB
<b>Flashpoint: ASTM D93</b>		<b>140</b>		degrees F		5/05/2014		REF
Corrosivity: SW846-9045C		6.6		pH units	5/02/2014	5/02/2014		SLD



**EAG Workorder:** 1404-00451

**Client Project:** Baker Perkins SA

**Client ID:** BP-LIQ-03

**Date/Time Sampled:** 4/23/2014 / 1045

**Received:** 4/25/2014

**EAG ID:** 1404-00451-3

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Prep Date</u>	<u>Analysis Date</u>	<u>Time</u>	<u>Analyst</u>
Aluminum: SW846-6010B	7429-90-5	<100	100	mg/kg	4/28/2014	5/01/2014		CMB
Antimony: SW846-6010B	7440-36-0	<8.1	8.1	mg/kg	4/28/2014	5/01/2014		CMB
Arsenic: SW846-6010B	7440-38-2	<4.1	4.1	mg/kg	4/28/2014	5/01/2014		CMB
Barium: SW846-6010B	7440-39-3	<2.0	2.0	mg/kg	4/28/2014	5/01/2014		CMB
Beryllium: SW846-6010B	7440-41-7	<1.0	1.0	mg/kg	4/28/2014	5/01/2014		CMB
Cadmium: SW846-6010B	7440-43-9	<1.0	1.0	mg/kg	4/28/2014	5/01/2014		CMB
Calcium: SW846-6010B	7440-70-2	<100	100	mg/kg	4/28/2014	5/01/2014		CMB
Chromium: SW846-6010B	7440-47-3	<2.0	2.0	mg/kg	4/28/2014	5/01/2014		CMB
Cobalt: SW846-6010B	7440-48-4	<2.0	2.0	mg/kg	4/28/2014	5/01/2014		CMB
Copper: SW846-6010B	7440-50-8	<10	10	mg/kg	4/28/2014	5/01/2014		CMB
Iron: SW846-6010B	7439-89-6	<20	20	mg/kg	4/28/2014	5/01/2014		CMB
Lead: SW846-6010B	7439-92-1	<4.1	4.1	mg/kg	4/28/2014	5/01/2014		CMB
Magnesium: SW846-6010B	7439-95-4	<100	100	mg/kg	4/28/2014	5/01/2014		CMB
Manganese: SW846-6010B	7439-96-5	<2.0	2.0	mg/kg	4/28/2014	5/01/2014		CMB
Mercury: SW846-7471B	7439-97-6	<0.070	0.070	mg/kg	4/29/2014	4/29/2014		CMB
Nickel: SW846-6010B	7440-02-0	<1.0	1.0	mg/kg	4/28/2014	5/01/2014		CMB
Potassium: SW846-6010B	7440-09-7	<100	100	mg/kg	4/28/2014	5/01/2014		CMB
Selenium: SW846-6010B	7782-49-2	<10	10	mg/kg	4/28/2014	5/01/2014		CMB
Silver: SW846-6010B	7440-22-4	<2.0	2.0	mg/kg	4/28/2014	5/01/2014		CMB
<b>Sodium: SW846-6010B</b>	7440-23-5	<b>207</b>	100	mg/kg	4/28/2014	5/01/2014		CMB
Thallium: SW846-6010B	7440-28-0	<4.1	4.1	mg/kg	4/28/2014	5/01/2014		CMB
Vanadium: SW846-6010B	7440-62-2	<10	10	mg/kg	4/28/2014	5/01/2014		CMB
<b>Zinc: SW846-6010B</b>	7440-66-6	<b>13.8</b>	4.1	mg/kg	4/28/2014	5/01/2014		CMB
Flashpoint: ASTM D93		>200		degrees F		5/05/2014		REF
Corrosivity: SW846-9045C		7.2		pH units	5/02/2014	5/02/2014		SLD





**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-001  
**Client ID:** BP-LIQ-01  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** DFM

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0950  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Semi-volatile Organic Compounds: SW846-8270C					
Acenaphthene	83-32-9	<440000	440000	ug/kg	4/30/2014
Acenaphthylene	208-96-8	<440000	440000	ug/kg	4/30/2014
Anthracene	120-12-7	<440000	440000	ug/kg	4/30/2014
Benzo(a)Anthracene	56-55-3	<440000	440000	ug/kg	4/30/2014
Benzo(a)pyrene	50-32-8	<440000	440000	ug/kg	4/30/2014
Benzo(b)fluoranthene	205-99-2	<440000	440000	ug/kg	4/30/2014
Benzo(g,h,i)perylene	191-24-2	<440000	440000	ug/kg	4/30/2014
Benzo(k)fluoranthene	207-08-9	<440000	440000	ug/kg	4/30/2014
bis(2-chloroethoxy)methane	111-91-1	<440000	440000	ug/kg	4/30/2014
bis(2-chloroethyl)ether	111-44-4	<440000	440000	ug/kg	4/30/2014
bis(2-chloroisopropyl)ether	108-60-1	<440000	440000	ug/kg	4/30/2014
bis(2-Ethylhexyl)phthalate	117-81-7	<440000	440000	ug/kg	4/30/2014
4-Bromo(phenylphenyl)ether	101-55-3	<440000	440000	ug/kg	4/30/2014
Butyl benzyl phthalate	85-68-7	<440000	440000	ug/kg	4/30/2014
Carbazole	86-74-8	<440000	440000	ug/kg	4/30/2014
4-Chloroaniline	106-47-8	<440000	440000	ug/kg	4/30/2014
4-Chloro(phenylphenyl)ether	7005-72-3	<440000	440000	ug/kg	4/30/2014
2-Chloronaphthalene	91-58-7	<440000	440000	ug/kg	4/30/2014
Chrysene	218-01-9	<440000	440000	ug/kg	4/30/2014
Dibenz(a,h)anthracene	53-70-3	<440000	440000	ug/kg	4/30/2014
Dibenzofuran	132-64-9	<440000	440000	ug/kg	4/30/2014
Di-n-butyl Phthalate	84-74-2	<440000	440000	ug/kg	4/30/2014
1,2-Dichlorobenzene	95-50-1	<440000	440000	ug/kg	4/30/2014
1,3-Dichlorobenzene	541-73-1	<440000	440000	ug/kg	4/30/2014
1,4-Dichlorobenzene	106-46-7	<440000	440000	ug/kg	4/30/2014
3,3-Dichlorobenzidine	91-94-1	<880000	880000	ug/kg	4/30/2014
Diethyl phthalate	84-66-2	<440000	440000	ug/kg	4/30/2014
Dimethyl phthalate	131-11-3	<440000	440000	ug/kg	4/30/2014
2,6-Dinitrotoluene	606-20-2	<440000	440000	ug/kg	4/30/2014
2,4-Dinitrotoluene	121-14-2	<440000	440000	ug/kg	4/30/2014
Di-n-octylphthalate	117-84-0	<440000	440000	ug/kg	4/30/2014
Diphenylamine	122-39-4	<440000	440000	ug/kg	4/30/2014
1,2-Diphenylhydrazine	122-66-7	<2200000	2200000	ug/kg	4/30/2014
Fluoranthene	206-44-0	<440000	440000	ug/kg	4/30/2014
Fluorene	86-73-7	<440000	440000	ug/kg	4/30/2014
Hexachlorobenzene	118-74-1	<440000	440000	ug/kg	4/30/2014
Hexachlorobutadiene	87-68-3	<440000	440000	ug/kg	4/30/2014
Hexachlorocyclopentadiene	77-47-4	<440000	440000	ug/kg	4/30/2014
Hexachloroethane	67-72-1	<440000	440000	ug/kg	4/30/2014
Indeno(1,2,3-cd)pyrene	193-39-5	<440000	440000	ug/kg	4/30/2014
Isophorone	78-59-1	<440000	440000	ug/kg	4/30/2014



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-001  
**Client ID:** BP-LIQ-01  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** DFM

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0950  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
2-Methylnaphthalene	91-57-6	<440000	440000	ug/kg	4/30/2014
Naphthalene	91-20-3	<440000	440000	ug/kg	4/30/2014
2-Nitroaniline	88-74-4	<440000	440000	ug/kg	4/30/2014
3-Nitroaniline	99-09-2	<440000	440000	ug/kg	4/30/2014
4-Nitroaniline	100-01-6	<440000	440000	ug/kg	4/30/2014
Nitrobenzene	98-95-3	<440000	440000	ug/kg	4/30/2014
N-Nitrosodi-n-propylamine	621-64-7	<440000	440000	ug/kg	4/30/2014
N-Nitrosodiphenylamine	86-30-6	<440000	440000	ug/kg	4/30/2014
Phenanthrene	85-01-8	<440000	440000	ug/kg	4/30/2014
Pyrene	129-00-0	<440000	440000	ug/kg	4/30/2014
1,2,4-Trichlorobenzene	120-82-1	<440000	440000	ug/kg	4/30/2014
4-Chloro-3-methylphenol	59-50-7	<440000	440000	ug/kg	4/30/2014
2-Chlorophenol	95-57-8	<440000	440000	ug/kg	4/30/2014
o-Cresol	95-48-7	<440000	440000	ug/kg	4/30/2014
m-Cresol**	108-39-4	<440000	440000	ug/kg	4/30/2014
p-Cresol**	106-44-5	<440000	440000	ug/kg	4/30/2014
2,4-Dichlorophenol	120-83-2	<440000	440000	ug/kg	4/30/2014
2,4-Dimethylphenol	105-67-9	<440000	440000	ug/kg	4/30/2014
2,4-Dinitrophenol	51-28-5	<2200000	2200000	ug/kg	4/30/2014
4,6-Dinitro-2-methylphenol	534-52-1	<2200000	2200000	ug/kg	4/30/2014
2-Nitrophenol	88-75-5	<440000	440000	ug/kg	4/30/2014
4-Nitrophenol	100-02-7	<2200000	2200000	ug/kg	4/30/2014
N-Nitrosodimethylamine	62-75-9	<440000	440000	ug/kg	4/30/2014
Pentachlorophenol	87-86-5	<2200000	2200000	ug/kg	4/30/2014
Phenol	108-95-2	<440000	440000	ug/kg	4/30/2014
2,4,5-Trichlorophenol	95-95-4	<440000	440000	ug/kg	4/30/2014
2,4,6-Trichlorophenol	88-06-2	<440000	440000	ug/kg	4/30/2014
Extraction: SW846-3550A		Complete			4/28/2014

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Recovery Limits</u>
Nitrobenzene-d5	92.5	(56 - 105)
2-Fluorobiphenyl	94.9	(53 - 115)
p-Terphenyl-d14	100	(52 - 140)
2-Fluorophenol	99.6	(41 - 101)
Phenol-d6	95.8	(46 - 108)
2,4,6-Tribromophenol	72.0	(43 - 142)



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-001  
**Client ID:** BP-LIQ-01  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** DFM

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0950  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Total Petroleum Hydrocarbons: SW846-8015M					
Extractable Petroleum Hydrocarbons: C10-C20		<360000	360000	mg/kg	4/30/2014
<b>Extractable Petroleum Hydrocarbons: C20-C34</b>		<b>1100000</b>	360000	mg/kg	4/30/2014
Extraction: SW846-3550A		Complete			4/29/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
n-Triacontane		MI		(35 - 138)	



**EAG Workorder** 1404-00451

**EAG ID:** 1404-00451-001

**Client ID:** BP-LIQ-01

**Client Project:** Baker Perkins SA

**Matrix:** Oil

**Analyst:** CMW

**Date Sampled:** 04/23/2014

**Time Sampled:** 0950

**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Volatile Organic Compounds: SW846-8260A					
Acetone	67-64-1	<76000	76000	ug/kg	5/01/2014
Acrolein	107-02-8	<38000	38000	ug/kg	5/01/2014
Acrylonitrile	107-13-1	<38000	38000	ug/kg	5/01/2014
Benzene	71-43-2	<7600	7600	ug/kg	5/01/2014
Bromochloromethane	74-97-5	<7600	7600	ug/kg	5/01/2014
Bromodichloromethane	75-27-4	<7600	7600	ug/kg	5/01/2014
Bromoform	75-25-2	<7600	7600	ug/kg	5/01/2014
Bromomethane	74-83-9	<7600	7600	ug/kg	5/01/2014
Carbon disulfide	75-15-0	<7600	7600	ug/kg	5/01/2014
Carbon Tetrachloride	56-23-5	<7600	7600	ug/kg	5/01/2014
Chlorobenzene	108-90-7	<7600	7600	ug/kg	5/01/2014
Chloroethane	75-00-3	<7600	7600	ug/kg	5/01/2014
Chloroform	67-66-3	<7600	7600	ug/kg	5/01/2014
Chloromethane	74-87-3	<7600	7600	ug/kg	5/01/2014
Dibromochloromethane	124-48-1	<7600	7600	ug/kg	5/01/2014
1,1-Dichloroethane	75-34-3	<7600	7600	ug/kg	5/01/2014
1,2-Dichloroethane	107-06-2	<7600	7600	ug/kg	5/01/2014
1,1-Dichloroethene	75-35-4	<7600	7600	ug/kg	5/01/2014
1,2-Dichloropropane	78-87-5	<7600	7600	ug/kg	5/01/2014
cis-1,2-Dichloroethene	156-59-2	<7600	7600	ug/kg	5/01/2014
trans-1,2-Dichloroethene	156-60-5	<7600	7600	ug/kg	5/01/2014
cis-1,3-Dichloropropene	10061-01-5	<7600	7600	ug/kg	5/01/2014
trans-1,3-Dichloropropene	10061-02-6	<7600	7600	ug/kg	5/01/2014
Ethylbenzene	100-41-4	<7600	7600	ug/kg	5/01/2014
2-Hexanone (MBK)	591-78-6	<38000	38000	ug/kg	5/01/2014
n-Hexane	110-54-3	<76000	76000	ug/kg	5/01/2014
Methylene Chloride	75-09-2	<38000	38000	ug/kg	5/01/2014
Methyl Ethyl Ketone (2-butanone)	78-93-3	<38000	38000	ug/kg	5/01/2014
Methyl Methacrylate	80-62-6	<7600	7600	ug/kg	5/01/2014
4-Methyl-2-Pentanone	108-10-1	<38000	38000	ug/kg	5/01/2014
Methyl Tert-Butyl Ether	1634-04-4	<7600	7600	ug/kg	5/01/2014
2-Nitropropane	79-46-9	<7600	7600	ug/kg	5/01/2014
Pentachloroethane	76-01-7	<7600	7600	ug/kg	5/01/2014
Propionitrile	107-12-0	<7600	7600	ug/kg	5/01/2014
Styrene	100-42-5	<7600	7600	ug/kg	5/01/2014
1,1,1,2-Tetrachloroethane	630-20-6	<7600	7600	ug/kg	5/01/2014
1,1,2,2-Tetrachloroethane	79-34-5	<7600	7600	ug/kg	5/01/2014
Tetrachloroethene (Tetrachloroethylene)	127-18-4	<7600	7600	ug/kg	5/01/2014
Toluene	108-88-3	<7600	7600	ug/kg	5/01/2014
1,2,4-Trichlorobenzene	120-82-1	<7600	7600	ug/kg	5/01/2014
1,1,1-Trichloroethane	71-55-6	<7600	7600	ug/kg	5/01/2014





**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-001  
**Client ID:** BP-LIQ-01  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** CMW

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0950  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
1,1,2-Trichloroethane	79-00-5	<7600	7600	ug/kg	5/01/2014
Trichloroethene (Trichloroethylene)	79-01-6	<7600	7600	ug/kg	5/01/2014
Trichlorofluoromethane	75-69-4	<7600	7600	ug/kg	5/01/2014
1,2,3-Trichloropropane	96-18-4	<7600	7600	ug/kg	5/01/2014
1,1,2 Trichlorotrifluoroethane	76-13-1	<7600	7600	ug/kg	5/01/2014
1,2,4-Trimethylbenzene	95-63-6	<7600	7600	ug/kg	5/01/2014
Vinyl Acetate	108-05-4	<7600	7600	ug/kg	5/01/2014
Vinyl Chloride	75-01-4	<7600	7600	ug/kg	5/01/2014
Xylenes (Total)	1330-20-7	<23000	23000	ug/kg	5/01/2014

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Recovery Limits</u>
4-Bromofluorobenzene	103	(79 - 126)
1,2-Dichloroethane-d4	102	(68 - 158)
Toluene-d8	97.2	(76 - 129)



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-001  
**Client ID:** BP-LIQ-01  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0950  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Polychlorinated Biphenyls: SW846-8082A					
Aroclor 1016	12674-11-2	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1221	11104-28-2	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1232	11141-16-5	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1242	53469-21-9	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1248	12672-29-6	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1254	11097-69-1	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1260	11096-82-5	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1268	11100-14-4	<1.0	1.0	mg/kg	4/29/2014
Extraction: SW846-3580		Complete			4/29/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Tetrachloro-m-xylene		80.6		(59 - 121)	
Decachlorobiphenyl		53.0		(56 - 131)	



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-001  
**Client ID:** BP-LIQ-01  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0950  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Gasoline Range Organics: SW846-8015M					
Gasoline Range Organics: C6-C12		<770	770	mg/kg	4/30/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Cumene		86.0		(72 - 126)	



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-002  
**Client ID:** BP-LIQ-02  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** DFM

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1005  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Semi-volatile Organic Compounds: SW846-8270C					
<b>Acenaphthene</b>	83-32-9	<b>760000</b>	480000	ug/kg	4/30/2014
Acenaphthylene	208-96-8	<480000	480000	ug/kg	4/30/2014
Anthracene	120-12-7	<480000	480000	ug/kg	4/30/2014
Benzo(a)Anthracene	56-55-3	<480000	480000	ug/kg	4/30/2014
Benzo(a)pyrene	50-32-8	<480000	480000	ug/kg	4/30/2014
Benzo(b)fluoranthene	205-99-2	<480000	480000	ug/kg	4/30/2014
Benzo(g,h,i)perylene	191-24-2	<480000	480000	ug/kg	4/30/2014
Benzo(k)fluoranthene	207-08-9	<480000	480000	ug/kg	4/30/2014
bis(2-chloroethoxy)methane	111-91-1	<480000	480000	ug/kg	4/30/2014
bis(2-chloroethyl)ether	111-44-4	<480000	480000	ug/kg	4/30/2014
bis(2-chloroisopropyl)ether	108-60-1	<480000	480000	ug/kg	4/30/2014
bis(2-Ethylhexyl)phthalate	117-81-7	<480000	480000	ug/kg	4/30/2014
4-Bromo(phenylphenyl)ether	101-55-3	<480000	480000	ug/kg	4/30/2014
Butyl benzyl phthalate	85-68-7	<480000	480000	ug/kg	4/30/2014
Carbazole	86-74-8	<480000	480000	ug/kg	4/30/2014
<b>4-Chloroaniline</b>	106-47-8	<b>1900000</b>	480000	ug/kg	4/30/2014
4-Chloro(phenylphenyl)ether	7005-72-3	<480000	480000	ug/kg	4/30/2014
2-Chloronaphthalene	91-58-7	<480000	480000	ug/kg	4/30/2014
Chrysene	218-01-9	<480000	480000	ug/kg	4/30/2014
Dibenz(a,h)anthracene	53-70-3	<480000	480000	ug/kg	4/30/2014
Dibenzofuran	132-64-9	<480000	480000	ug/kg	4/30/2014
Di-n-butyl Phthalate	84-74-2	<480000	480000	ug/kg	4/30/2014
1,2-Dichlorobenzene	95-50-1	<480000	480000	ug/kg	4/30/2014
1,3-Dichlorobenzene	541-73-1	<480000	480000	ug/kg	4/30/2014
1,4-Dichlorobenzene	106-46-7	<480000	480000	ug/kg	4/30/2014
3,3-Dichlorobenzidine	91-94-1	<960000	960000	ug/kg	4/30/2014
Diethyl phthalate	84-66-2	<480000	480000	ug/kg	4/30/2014
Dimethyl phthalate	131-11-3	<480000	480000	ug/kg	4/30/2014
2,6-Dinitrotoluene	606-20-2	<480000	480000	ug/kg	4/30/2014
2,4-Dinitrotoluene	121-14-2	<480000	480000	ug/kg	4/30/2014
Di-n-octylphthalate	117-84-0	<480000	480000	ug/kg	4/30/2014
Diphenylamine	122-39-4	<480000	480000	ug/kg	4/30/2014
1,2-Diphenylhydrazine	122-66-7	<2400000	2400000	ug/kg	4/30/2014
Fluoranthene	206-44-0	<480000	480000	ug/kg	4/30/2014
<b>Fluorene</b>	86-73-7	<b>840000</b>	480000	ug/kg	4/30/2014
Hexachlorobenzene	118-74-1	<480000	480000	ug/kg	4/30/2014
Hexachlorobutadiene	87-68-3	<480000	480000	ug/kg	4/30/2014
Hexachlorocyclopentadiene	77-47-4	<480000	480000	ug/kg	4/30/2014
Hexachloroethane	67-72-1	<480000	480000	ug/kg	4/30/2014
Indeno(1,2,3-cd)pyrene	193-39-5	<480000	480000	ug/kg	4/30/2014
Isophorone	78-59-1	<480000	480000	ug/kg	4/30/2014



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-002  
**Client ID:** BP-LIQ-02  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** DFM

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1005  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
2-Methylnaphthalene	91-57-6	7600000	480000	ug/kg	4/30/2014
Naphthalene	91-20-3	1900000	480000	ug/kg	4/30/2014
2-Nitroaniline	88-74-4	<480000	480000	ug/kg	4/30/2014
3-Nitroaniline	99-09-2	<480000	480000	ug/kg	4/30/2014
4-Nitroaniline	100-01-6	<480000	480000	ug/kg	4/30/2014
Nitrobenzene	98-95-3	<480000	480000	ug/kg	4/30/2014
N-Nitrosodi-n-propylamine	621-64-7	<480000	480000	ug/kg	4/30/2014
N-Nitrosodiphenylamine	86-30-6	<480000	480000	ug/kg	4/30/2014
Phenanthrene	85-01-8	1200000	480000	ug/kg	4/30/2014
Pyrene	129-00-0	<480000	480000	ug/kg	4/30/2014
1,2,4-Trichlorobenzene	120-82-1	<480000	480000	ug/kg	4/30/2014
4-Chloro-3-methylphenol	59-50-7	<480000	480000	ug/kg	4/30/2014
2-Chlorophenol	95-57-8	<480000	480000	ug/kg	4/30/2014
o-Cresol	95-48-7	<480000	480000	ug/kg	4/30/2014
m-Cresol**	108-39-4	<480000	480000	ug/kg	4/30/2014
p-Cresol**	106-44-5	<480000	480000	ug/kg	4/30/2014
2,4-Dichlorophenol	120-83-2	<480000	480000	ug/kg	4/30/2014
2,4-Dimethylphenol	105-67-9	<480000	480000	ug/kg	4/30/2014
2,4-Dinitrophenol	51-28-5	<2400000	2400000	ug/kg	4/30/2014
4,6-Dinitro-2-methylphenol	534-52-1	<2400000	2400000	ug/kg	4/30/2014
2-Nitrophenol	88-75-5	<480000	480000	ug/kg	4/30/2014
4-Nitrophenol	100-02-7	<2400000	2400000	ug/kg	4/30/2014
N-Nitrosodimethylamine	62-75-9	<480000	480000	ug/kg	4/30/2014
Pentachlorophenol	87-86-5	<2400000	2400000	ug/kg	4/30/2014
Phenol	108-95-2	<480000	480000	ug/kg	4/30/2014
2,4,5-Trichlorophenol	95-95-4	<480000	480000	ug/kg	4/30/2014
2,4,6-Trichlorophenol	88-06-2	<480000	480000	ug/kg	4/30/2014
Extraction: SW846-3550A		Complete			4/28/2014

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Recovery Limits</u>
Nitrobenzene-d5	130	(56 - 105)
2-Fluorobiphenyl	97.2	(53 - 115)
p-Terphenyl-d14	105	(52 - 140)
2-Fluorophenol	109	(41 - 101)
Phenol-d6	133	(46 - 108)
2,4,6-Tribromophenol	64.9	(43 - 142)





**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-002  
**Client ID:** BP-LIQ-02  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** DFM

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1005  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Total Petroleum Hydrocarbons: SW846-8015M					
<b>Extractable Petroleum Hydrocarbons: C10-C20</b>		<b>910000</b>	380000	mg/kg	4/30/2014
Extractable Petroleum Hydrocarbons: C20-C34		<380000	380000	mg/kg	4/30/2014
Extraction: SW846-3550A		Complete			4/29/2014
<u>Surrogate</u>		<u>Percent Recovery</u>	<u>Recovery Limits</u>		
n-Triacontane		66.1	(35 - 138)		



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-002  
**Client ID:** BP-LIQ-02  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** CMW

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1005  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Volatile Organic Compounds: SW846-8260A					
Acetone	67-64-1	<79000	79000	ug/kg	5/01/2014
Acrolein	107-02-8	<40000	40000	ug/kg	5/01/2014
Acrylonitrile	107-13-1	<40000	40000	ug/kg	5/01/2014
<b>Benzene</b>	71-43-2	<b>37000</b>	7900	ug/kg	5/01/2014
Bromochloromethane	74-97-5	<7900	7900	ug/kg	5/01/2014
Bromodichloromethane	75-27-4	<7900	7900	ug/kg	5/01/2014
Bromoform	75-25-2	<7900	7900	ug/kg	5/01/2014
Bromomethane	74-83-9	<7900	7900	ug/kg	5/01/2014
Carbon disulfide	75-15-0	<7900	7900	ug/kg	5/01/2014
Carbon Tetrachloride	56-23-5	<7900	7900	ug/kg	5/01/2014
Chlorobenzene	108-90-7	<7900	7900	ug/kg	5/01/2014
Chloroethane	75-00-3	<7900	7900	ug/kg	5/01/2014
Chloroform	67-66-3	<7900	7900	ug/kg	5/01/2014
Chloromethane	74-87-3	<7900	7900	ug/kg	5/01/2014
Dibromochloromethane	124-48-1	<7900	7900	ug/kg	5/01/2014
1,1-Dichloroethane	75-34-3	<7900	7900	ug/kg	5/01/2014
1,2-Dichloroethane	107-06-2	<7900	7900	ug/kg	5/01/2014
1,1-Dichloroethene	75-35-4	<7900	7900	ug/kg	5/01/2014
1,2-Dichloropropane	78-87-5	<7900	7900	ug/kg	5/01/2014
cis-1,2-Dichloroethene	156-59-2	<7900	7900	ug/kg	5/01/2014
trans-1,2-Dichloroethene	156-60-5	<7900	7900	ug/kg	5/01/2014
cis-1,3-Dichloropropene	10061-01-5	<7900	7900	ug/kg	5/01/2014
trans-1,3-Dichloropropene	10061-02-6	<7900	7900	ug/kg	5/01/2014
<b>Ethylbenzene</b>	100-41-4	<b>590000</b>	7900	ug/kg	5/01/2014
2-Hexanone (MBK)	591-78-6	<40000	40000	ug/kg	5/01/2014
n-Hexane	110-54-3	<79000	79000	ug/kg	5/01/2014
Methylene Chloride	75-09-2	<40000	40000	ug/kg	5/01/2014
Methyl Ethyl Ketone (2-butanone)	78-93-3	<40000	40000	ug/kg	5/01/2014
Methyl Methacrylate	80-62-6	<7900	7900	ug/kg	5/01/2014
4-Methyl-2-Pentanone	108-10-1	<40000	40000	ug/kg	5/01/2014
Methyl Tert-Butyl Ether	1634-04-4	<7900	7900	ug/kg	5/01/2014
2-Nitropropane	79-46-9	<7900	7900	ug/kg	5/01/2014
Pentachloroethane	76-01-7	<7900	7900	ug/kg	5/01/2014
Propionitrile	107-12-0	<7900	7900	ug/kg	5/01/2014
Styrene	100-42-5	<7900	7900	ug/kg	5/01/2014
1,1,1,2-Tetrachloroethane	630-20-6	<7900	7900	ug/kg	5/01/2014
1,1,2,2-Tetrachloroethane	79-34-5	<7900	7900	ug/kg	5/01/2014
Tetrachloroethene (Tetrachloroethylene)	127-18-4	<7900	7900	ug/kg	5/01/2014
<b>Toluene</b>	108-88-3	<b>540000</b>	7900	ug/kg	5/01/2014
1,2,4-Trichlorobenzene	120-82-1	<7900	7900	ug/kg	5/01/2014
1,1,1-Trichloroethane	71-55-6	<7900	7900	ug/kg	5/01/2014



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-002  
**Client ID:** BP-LIQ-02  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** CMW

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1005  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
1,1,2-Trichloroethane	79-00-5	<7900	7900	ug/kg	5/01/2014
Trichloroethene (Trichloroethylene)	79-01-6	<7900	7900	ug/kg	5/01/2014
Trichlorofluoromethane	75-69-4	<7900	7900	ug/kg	5/01/2014
1,2,3-Trichloropropane	96-18-4	<7900	7900	ug/kg	5/01/2014
1,1,2 Trichlorotrifluoroethane	76-13-1	<7900	7900	ug/kg	5/01/2014
<b>1,2,4-Trimethylbenzene</b>	95-63-6	<b>2800000</b>	79000	ug/kg	5/01/2014
Vinyl Acetate	108-05-4	<7900	7900	ug/kg	5/01/2014
Vinyl Chloride	75-01-4	<7900	7900	ug/kg	5/01/2014
<b>Xylenes (Total)</b>	1330-20-7	<b>2200000</b>	240000	ug/kg	5/01/2014

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Recovery Limits</u>
4-Bromofluorobenzene	113	(79 - 126)
1,2-Dichloroethane-d4	102	(68 - 158)
Toluene-d8	111	(76 - 129)



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-002  
**Client ID:** BP-LIQ-02  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1005  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Polychlorinated Biphenyls: SW846-8082A					
Aroclor 1016	12674-11-2	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1221	11104-28-2	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1232	11141-16-5	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1242	53469-21-9	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1248	12672-29-6	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1254	11097-69-1	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1260	11096-82-5	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1268	11100-14-4	<1.0	1.0	mg/kg	4/29/2014
Extraction: SW846-3580		Complete			4/29/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Tetrachloro-m-xylene		65.2		(59 - 121)	
Decachlorobiphenyl		58.6		(56 - 131)	



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-002  
**Client ID:** BP-LIQ-02  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1005  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Gasoline Range Organics: SW846-8015M					
<b>Gasoline Range Organics: C6-C12</b>		<b>99000</b>	8600	mg/kg	4/30/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Cumene		MI		(72 - 126)	





**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-003  
**Client ID:** BP-LIQ-03  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** DFM

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1045  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Semi-volatile Organic Compounds: SW846-8270C					
Acenaphthene	83-32-9	<500000	500000	ug/kg	4/30/2014
Acenaphthylene	208-96-8	<500000	500000	ug/kg	4/30/2014
Anthracene	120-12-7	<500000	500000	ug/kg	4/30/2014
Benzo(a)Anthracene	56-55-3	<500000	500000	ug/kg	4/30/2014
Benzo(a)pyrene	50-32-8	<500000	500000	ug/kg	4/30/2014
Benzo(b)fluoranthene	205-99-2	<500000	500000	ug/kg	4/30/2014
Benzo(g,h,i)perylene	191-24-2	<500000	500000	ug/kg	4/30/2014
Benzo(k)fluoranthene	207-08-9	<500000	500000	ug/kg	4/30/2014
bis(2-chloroethoxy)methane	111-91-1	<500000	500000	ug/kg	4/30/2014
bis(2-chloroethyl)ether	111-44-4	<500000	500000	ug/kg	4/30/2014
bis(2-chloroisopropyl)ether	108-60-1	<500000	500000	ug/kg	4/30/2014
bis(2-Ethylhexyl)phthalate	117-81-7	<500000	500000	ug/kg	4/30/2014
4-Bromo(phenylphenyl)ether	101-55-3	<500000	500000	ug/kg	4/30/2014
Butyl benzyl phthalate	85-68-7	<500000	500000	ug/kg	4/30/2014
Carbazole	86-74-8	<500000	500000	ug/kg	4/30/2014
4-Chloroaniline	106-47-8	<500000	500000	ug/kg	4/30/2014
4-Chloro(phenylphenyl)ether	7005-72-3	<500000	500000	ug/kg	4/30/2014
2-Chloronaphthalene	91-58-7	<500000	500000	ug/kg	4/30/2014
Chrysene	218-01-9	<500000	500000	ug/kg	4/30/2014
Dibenz(a,h)anthracene	53-70-3	<500000	500000	ug/kg	4/30/2014
Dibenzofuran	132-64-9	<500000	500000	ug/kg	4/30/2014
Di-n-butyl Phthalate	84-74-2	<500000	500000	ug/kg	4/30/2014
1,2-Dichlorobenzene	95-50-1	<500000	500000	ug/kg	4/30/2014
1,3-Dichlorobenzene	541-73-1	<500000	500000	ug/kg	4/30/2014
1,4-Dichlorobenzene	106-46-7	<500000	500000	ug/kg	4/30/2014
3,3-Dichlorobenzidine	91-94-1	<1000000	1000000	ug/kg	4/30/2014
Diethyl phthalate	84-66-2	<500000	500000	ug/kg	4/30/2014
Dimethyl phthalate	131-11-3	<500000	500000	ug/kg	4/30/2014
2,6-Dinitrotoluene	606-20-2	<500000	500000	ug/kg	4/30/2014
2,4-Dinitrotoluene	121-14-2	<500000	500000	ug/kg	4/30/2014
Di-n-octylphthalate	117-84-0	<500000	500000	ug/kg	4/30/2014
Diphenylamine	122-39-4	<500000	500000	ug/kg	4/30/2014
1,2-Diphenylhydrazine	122-66-7	<2500000	2500000	ug/kg	4/30/2014
Fluoranthene	206-44-0	<500000	500000	ug/kg	4/30/2014
Fluorene	86-73-7	<500000	500000	ug/kg	4/30/2014
Hexachlorobenzene	118-74-1	<500000	500000	ug/kg	4/30/2014
Hexachlorobutadiene	87-68-3	<500000	500000	ug/kg	4/30/2014
Hexachlorocyclopentadiene	77-47-4	<500000	500000	ug/kg	4/30/2014
Hexachloroethane	67-72-1	<500000	500000	ug/kg	4/30/2014
Indeno(1,2,3-cd)pyrene	193-39-5	<500000	500000	ug/kg	4/30/2014
Isophorone	78-59-1	<500000	500000	ug/kg	4/30/2014



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-003  
**Client ID:** BP-LIQ-03  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** DFM

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1045  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
2-Methylnaphthalene	91-57-6	<500000	500000	ug/kg	4/30/2014
Naphthalene	91-20-3	<500000	500000	ug/kg	4/30/2014
2-Nitroaniline	88-74-4	<500000	500000	ug/kg	4/30/2014
3-Nitroaniline	99-09-2	<500000	500000	ug/kg	4/30/2014
4-Nitroaniline	100-01-6	<500000	500000	ug/kg	4/30/2014
Nitrobenzene	98-95-3	<500000	500000	ug/kg	4/30/2014
N-Nitrosodi-n-propylamine	621-64-7	<500000	500000	ug/kg	4/30/2014
N-Nitrosodiphenylamine	86-30-6	<500000	500000	ug/kg	4/30/2014
Phenanthrene	85-01-8	<500000	500000	ug/kg	4/30/2014
Pyrene	129-00-0	<500000	500000	ug/kg	4/30/2014
1,2,4-Trichlorobenzene	120-82-1	<500000	500000	ug/kg	4/30/2014
4-Chloro-3-methylphenol	59-50-7	<500000	500000	ug/kg	4/30/2014
2-Chlorophenol	95-57-8	<500000	500000	ug/kg	4/30/2014
o-Cresol	95-48-7	<500000	500000	ug/kg	4/30/2014
m-Cresol**	108-39-4	<500000	500000	ug/kg	4/30/2014
p-Cresol**	106-44-5	<500000	500000	ug/kg	4/30/2014
2,4-Dichlorophenol	120-83-2	<500000	500000	ug/kg	4/30/2014
2,4-Dimethylphenol	105-67-9	<500000	500000	ug/kg	4/30/2014
2,4-Dinitrophenol	51-28-5	<2500000	2500000	ug/kg	4/30/2014
4,6-Dinitro-2-methylphenol	534-52-1	<2500000	2500000	ug/kg	4/30/2014
2-Nitrophenol	88-75-5	<500000	500000	ug/kg	4/30/2014
4-Nitrophenol	100-02-7	<2500000	2500000	ug/kg	4/30/2014
N-Nitrosodimethylamine	62-75-9	<500000	500000	ug/kg	4/30/2014
Pentachlorophenol	87-86-5	<2500000	2500000	ug/kg	4/30/2014
Phenol	108-95-2	<500000	500000	ug/kg	4/30/2014
2,4,5-Trichlorophenol	95-95-4	<500000	500000	ug/kg	4/30/2014
2,4,6-Trichlorophenol	88-06-2	<500000	500000	ug/kg	4/30/2014
Extraction: SW846-3550A		Complete			4/28/2014

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Recovery Limits</u>
Nitrobenzene-d5	93.0	(56 - 105)
2-Fluorobiphenyl	92.5	(53 - 115)
p-Terphenyl-d14	108	(52 - 140)
2-Fluorophenol	106	(41 - 101)
Phenol-d6	101	(46 - 108)
2,4,6-Tribromophenol	76.0	(43 - 142)



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-003  
**Client ID:** BP-LIQ-03  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** DFM

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1045  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Total Petroleum Hydrocarbons: SW846-8015M					
<b>Extractable Petroleum Hydrocarbons: C10-C20</b>		<b>490000</b>	86000	mg/kg	4/30/2014
<b>Extractable Petroleum Hydrocarbons: C20-C34</b>		<b>500000</b>	86000	mg/kg	4/30/2014
Extraction: SW846-3550A		Complete			4/29/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
n-Triacontane		71.4		(35 - 138)	



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-003  
**Client ID:** BP-LIQ-03  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** CMW

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1045  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Volatile Organic Compounds: SW846-8260A					
Acetone	67-64-1	<73000	73000	ug/kg	5/01/2014
Acrolein	107-02-8	<37000	37000	ug/kg	5/01/2014
Acrylonitrile	107-13-1	<37000	37000	ug/kg	5/01/2014
Benzene	71-43-2	<7300	7300	ug/kg	5/01/2014
Bromochloromethane	74-97-5	<7300	7300	ug/kg	5/01/2014
Bromodichloromethane	75-27-4	<7300	7300	ug/kg	5/01/2014
Bromoform	75-25-2	<7300	7300	ug/kg	5/01/2014
Bromomethane	74-83-9	<7300	7300	ug/kg	5/01/2014
Carbon disulfide	75-15-0	<7300	7300	ug/kg	5/01/2014
Carbon Tetrachloride	56-23-5	<7300	7300	ug/kg	5/01/2014
Chlorobenzene	108-90-7	<7300	7300	ug/kg	5/01/2014
Chloroethane	75-00-3	<7300	7300	ug/kg	5/01/2014
Chloroform	67-66-3	<7300	7300	ug/kg	5/01/2014
Chloromethane	74-87-3	<7300	7300	ug/kg	5/01/2014
Dibromochloromethane	124-48-1	<7300	7300	ug/kg	5/01/2014
1,1-Dichloroethane	75-34-3	<7300	7300	ug/kg	5/01/2014
1,2-Dichloroethane	107-06-2	<7300	7300	ug/kg	5/01/2014
1,1-Dichloroethene	75-35-4	<7300	7300	ug/kg	5/01/2014
1,2-Dichloropropane	78-87-5	<7300	7300	ug/kg	5/01/2014
cis-1,2-Dichloroethene	156-59-2	<7300	7300	ug/kg	5/01/2014
trans-1,2-Dichloroethene	156-60-5	<7300	7300	ug/kg	5/01/2014
cis-1,3-Dichloropropene	10061-01-5	<7300	7300	ug/kg	5/01/2014
trans-1,3-Dichloropropene	10061-02-6	<7300	7300	ug/kg	5/01/2014
<b>Ethylbenzene</b>	100-41-4	<b>13000</b>	7300	ug/kg	5/01/2014
2-Hexanone (MBK)	591-78-6	<37000	37000	ug/kg	5/01/2014
n-Hexane	110-54-3	<73000	73000	ug/kg	5/01/2014
Methylene Chloride	75-09-2	<37000	37000	ug/kg	5/01/2014
Methyl Ethyl Ketone (2-butanone)	78-93-3	<37000	37000	ug/kg	5/01/2014
Methyl Methacrylate	80-62-6	<7300	7300	ug/kg	5/01/2014
4-Methyl-2-Pentanone	108-10-1	<37000	37000	ug/kg	5/01/2014
Methyl Tert-Butyl Ether	1634-04-4	<7300	7300	ug/kg	5/01/2014
2-Nitropropane	79-46-9	<7300	7300	ug/kg	5/01/2014
Pentachloroethane	76-01-7	<7300	7300	ug/kg	5/01/2014
Propionitrile	107-12-0	<7300	7300	ug/kg	5/01/2014
Styrene	100-42-5	<7300	7300	ug/kg	5/01/2014
1,1,1,2-Tetrachloroethane	630-20-6	<7300	7300	ug/kg	5/01/2014
1,1,2,2-Tetrachloroethane	79-34-5	<7300	7300	ug/kg	5/01/2014
Tetrachloroethene (Tetrachloroethylene)	127-18-4	<7300	7300	ug/kg	5/01/2014
<b>Toluene</b>	108-88-3	<b>12000</b>	7300	ug/kg	5/01/2014
1,2,4-Trichlorobenzene	120-82-1	<7300	7300	ug/kg	5/01/2014
1,1,1-Trichloroethane	71-55-6	<7300	7300	ug/kg	5/01/2014



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-003  
**Client ID:** BP-LIQ-03  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** CMW

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1045  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
1,1,2-Trichloroethane	79-00-5	<7300	7300	ug/kg	5/01/2014
Trichloroethene (Trichloroethylene)	79-01-6	<7300	7300	ug/kg	5/01/2014
Trichlorofluoromethane	75-69-4	<7300	7300	ug/kg	5/01/2014
1,2,3-Trichloropropane	96-18-4	<7300	7300	ug/kg	5/01/2014
1,1,2 Trichlorotrifluoroethane	76-13-1	<7300	7300	ug/kg	5/01/2014
<b>1,2,4-Trimethylbenzene</b>	95-63-6	<b>72000</b>	7300	ug/kg	5/01/2014
Vinyl Acetate	108-05-4	<7300	7300	ug/kg	5/01/2014
Vinyl Chloride	75-01-4	<7300	7300	ug/kg	5/01/2014
<b>Xylenes (Total)</b>	1330-20-7	<b>60000</b>	22000	ug/kg	5/01/2014

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Recovery Limits</u>
4-Bromofluorobenzene	102	(79 - 126)
1,2-Dichloroethane-d4	101	(68 - 158)
Toluene-d8	100	(76 - 129)





**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-003  
**Client ID:** BP-LIQ-03  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1045  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Polychlorinated Biphenyls: SW846-8082A					
Aroclor 1016	12674-11-2	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1221	11104-28-2	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1232	11141-16-5	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1242	53469-21-9	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1248	12672-29-6	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1254	11097-69-1	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1260	11096-82-5	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1268	11100-14-4	<1.0	1.0	mg/kg	4/29/2014
Extraction: SW846-3580		Complete			4/29/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Tetrachloro-m-xylene		66.8		(59 - 121)	
Decachlorobiphenyl		61.6		(56 - 131)	



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-003  
**Client ID:** BP-LIQ-03  
**Client Project:** Baker Perkins SA

**Matrix:** Oil  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 1045  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Gasoline Range Organics: SW846-8015M					
Gasoline Range Organics: C6-C12		<870	870	mg/kg	4/30/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Cumene		88.9		(72 - 126)	



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-004  
**Client ID:** BP-WB-01  
**Client Project:** Baker Perkins SA

**Matrix:** Solid  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0830  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Polychlorinated Biphenyls: SW846-8082A					
Aroclor 1016	12674-11-2	<0.17	0.17	mg/kg	4/29/2014
Aroclor 1221	11104-28-2	<0.17	0.17	mg/kg	4/29/2014
Aroclor 1232	11141-16-5	<0.17	0.17	mg/kg	4/29/2014
Aroclor 1242	53469-21-9	<0.17	0.17	mg/kg	4/29/2014
Aroclor 1248	12672-29-6	<0.17	0.17	mg/kg	4/29/2014
Aroclor 1254	11097-69-1	<0.17	0.17	mg/kg	4/29/2014
Aroclor 1260	11096-82-5	<0.17	0.17	mg/kg	4/29/2014
Aroclor 1268	11100-14-4	<0.17	0.17	mg/kg	4/29/2014
Extraction: SW846-3550A		Complete			4/28/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Tetrachloro-m-xylene		112		(64 - 130)	
Decachlorobiphenyl		69.8		(66 - 131)	



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-005  
**Client ID:** BP-WB-02  
**Client Project:** Baker Perkins SA

**Matrix:** Solid  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0845  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Polychlorinated Biphenyls: SW846-8082A					
Aroclor 1016	12674-11-2	<0.14	0.14	mg/kg	4/29/2014
Aroclor 1221	11104-28-2	<0.14	0.14	mg/kg	4/29/2014
Aroclor 1232	11141-16-5	<0.14	0.14	mg/kg	4/29/2014
Aroclor 1242	53469-21-9	<0.14	0.14	mg/kg	4/29/2014
<b>Aroclor 1248</b>	12672-29-6	<b>1.1</b>	0.14	mg/kg	4/29/2014
Aroclor 1254	11097-69-1	<3.5	3.5	mg/kg	4/29/2014
Aroclor 1260	11096-82-5	<3.5	3.5	mg/kg	4/29/2014
Aroclor 1268	11100-14-4	<3.5	3.5	mg/kg	4/29/2014
Extraction: SW846-3550A		Complete			4/28/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Tetrachloro-m-xylene		102		(64 - 130)	
Decachlorobiphenyl		84.4		(66 - 131)	



**EAG Workorder** 1404-00451

**EAG ID:** 1404-00451-006

**Client ID:** BP-WB-03

**Client Project:** Baker Perkins SA

**Matrix:** Solid

**Analyst:** JAH

**Date Sampled:** 04/23/2014

**Time Sampled:** 0855

**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Polychlorinated Biphenyls: SW846-8082A					
Aroclor 1016	12674-11-2	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1221	11104-28-2	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1232	11141-16-5	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1242	53469-21-9	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1248	12672-29-6	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1254	11097-69-1	<10	10	mg/kg	4/29/2014
Aroclor 1260	11096-82-5	<10	10	mg/kg	4/29/2014
Aroclor 1268	11100-14-4	<10	10	mg/kg	4/29/2014
Extraction: SW846-3550A		Complete			4/28/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Tetrachloro-m-xylene		89.0		(64 - 130)	
Decachlorobiphenyl		MI		(66 - 131)	





**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-007  
**Client ID:** BP-WB-04  
**Client Project:** Baker Perkins SA

**Matrix:** Solid  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0910  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Polychlorinated Biphenyls: SW846-8082A					
Aroclor 1016	12674-11-2	<0.40	0.40	mg/kg	4/29/2014
Aroclor 1221	11104-28-2	<0.40	0.40	mg/kg	4/29/2014
Aroclor 1232	11141-16-5	<0.40	0.40	mg/kg	4/29/2014
Aroclor 1242	53469-21-9	<0.40	0.40	mg/kg	4/29/2014
Aroclor 1248	12672-29-6	<0.40	0.40	mg/kg	4/29/2014
Aroclor 1254	11097-69-1	<1.2	1.2	mg/kg	4/29/2014
Aroclor 1260	11096-82-5	<1.2	1.2	mg/kg	4/29/2014
Aroclor 1268	11100-14-4	<1.2	1.2	mg/kg	4/29/2014
Extraction: SW846-3550A		Complete			4/28/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Tetrachloro-m-xylene		79.6		(64 - 130)	
Decachlorobiphenyl		57.6		(66 - 131)	



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-008  
**Client ID:** BP-WB-05  
**Client Project:** Baker Perkins SA

**Matrix:** Solid  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:** 0920  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Polychlorinated Biphenyls: SW846-8082A					
Aroclor 1016	12674-11-2	<1.1	1.1	mg/kg	4/29/2014
Aroclor 1221	11104-28-2	<1.1	1.1	mg/kg	4/29/2014
Aroclor 1232	11141-16-5	<1.1	1.1	mg/kg	4/29/2014
Aroclor 1242	53469-21-9	<1.1	1.1	mg/kg	4/29/2014
Aroclor 1248	12672-29-6	<1.1	1.1	mg/kg	4/29/2014
<b>Aroclor 1254</b>	11097-69-1	<b>15</b>	1.1	mg/kg	4/29/2014
Aroclor 1260	11096-82-5	<1.1	1.1	mg/kg	4/29/2014
Aroclor 1268	11100-14-4	<1.1	1.1	mg/kg	4/29/2014
Extraction: SW846-3550A		Complete			4/28/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Tetrachloro-m-xylene		MI		(64 - 130)	
Decachlorobiphenyl		112		(66 - 131)	



**EAG Workorder** 1404-00451  
**EAG ID:** 1404-00451-009  
**Client ID:** BP-WB-DUP1  
**Client Project:** Baker Perkins SA

**Matrix:** Solid  
**Analyst:** JAH

**Date Sampled:** 04/23/2014  
**Time Sampled:**  
**Date Received:** 04/25/2014

<u>Parameter</u>	<u>CAS #</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Polychlorinated Biphenyls: SW846-8082A					
Aroclor 1016	12674-11-2	<0.14	0.14	mg/kg	4/29/2014
Aroclor 1221	11104-28-2	<0.14	0.14	mg/kg	4/29/2014
Aroclor 1232	11141-16-5	<0.14	0.14	mg/kg	4/29/2014
Aroclor 1242	53469-21-9	<0.14	0.14	mg/kg	4/29/2014
<b>Aroclor 1248</b>	12672-29-6	<b>1.7</b>	0.14	mg/kg	4/29/2014
Aroclor 1254	11097-69-1	<3.5	3.5	mg/kg	4/29/2014
Aroclor 1260	11096-82-5	<3.5	3.5	mg/kg	4/29/2014
Aroclor 1268	11100-14-4	<3.5	3.5	mg/kg	4/29/2014
Extraction: SW846-3550A		Complete			4/28/2014
<u>Surrogate</u>		<u>Percent Recovery</u>		<u>Recovery Limits</u>	
Tetrachloro-m-xylene		91.0		(64 - 130)	
Decachlorobiphenyl		MI		(66 - 131)	



## Data Entry Batch Number Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

<u>EAG ID</u>	<u>Client ID</u>	<u>Parameter</u>	<u>Data Entry Batch</u>
001	BP-LIQ-01	Corrosivity: SW846-9045C	129184
		Gasoline Range Organics: SW846-8015M	129188
		Metals: SW846-6010B/7471B	129161
		Polychlorinated Biphenyls: SW846-8082A	129177
		Semi-volatile Organic Compounds: SW846-8270C	129136
		Total Petroleum Hydrocarbons: SW846-8015M	129138
		Volatile Organic Compounds: SW846-8260A	129165
002	BP-LIQ-02	Corrosivity: SW846-9045C	129184
		Gasoline Range Organics: SW846-8015M	129188
		Metals: SW846-6010B/7471B	129161
		Polychlorinated Biphenyls: SW846-8082A	129177
		Semi-volatile Organic Compounds: SW846-8270C	129136
		Total Petroleum Hydrocarbons: SW846-8015M	129138
		Volatile Organic Compounds: SW846-8260A	129165
003	BP-LIQ-03	Corrosivity: SW846-9045C	129184
		Gasoline Range Organics: SW846-8015M	129188
		Metals: SW846-6010B/7471B	129161
		Polychlorinated Biphenyls: SW846-8082A	129177
		Semi-volatile Organic Compounds: SW846-8270C	129136
		Total Petroleum Hydrocarbons: SW846-8015M	129138
		Volatile Organic Compounds: SW846-8260A	129165
004	BP-WB-01	Polychlorinated Biphenyls: SW846-8082A	129179
005	BP-WB-02	Polychlorinated Biphenyls: SW846-8082A	129179
006	BP-WB-03	Polychlorinated Biphenyls: SW846-8082A	129179
007	BP-WB-04	Polychlorinated Biphenyls: SW846-8082A	129179
008	BP-WB-05	Polychlorinated Biphenyls: SW846-8082A	129179
009	BP-WB-DUP1	Polychlorinated Biphenyls: SW846-8082A	129179



## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Oil

**Data Entry Batch:** 129165

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Acetone	<1000	1000	ug/kg	4/30/2014
Acrolein	<500	500	ug/kg	4/30/2014
Acrylonitrile	<500	500	ug/kg	4/30/2014
Benzene	<100	100	ug/kg	4/30/2014
Bromochloromethane	<100	100	ug/kg	4/30/2014
Bromodichloromethane	<100	100	ug/kg	4/30/2014
Bromoform	<100	100	ug/kg	4/30/2014
Bromomethane	<100	100	ug/kg	4/30/2014
Carbon disulfide	<100	100	ug/kg	4/30/2014
Carbon Tetrachloride	<100	100	ug/kg	4/30/2014
Chlorobenzene	<100	100	ug/kg	4/30/2014
Chloroethane	<100	100	ug/kg	4/30/2014
Chloroform	<100	100	ug/kg	4/30/2014
Chloromethane	<100	100	ug/kg	4/30/2014
Dibromochloromethane	<100	100	ug/kg	4/30/2014
1,1-Dichloroethane	<100	100	ug/kg	4/30/2014
1,2-Dichloroethane	<100	100	ug/kg	4/30/2014
1,1-Dichloroethene	<100	100	ug/kg	4/30/2014
1,2-Dichloropropane	<100	100	ug/kg	4/30/2014
cis-1,2-Dichloroethene	<100	100	ug/kg	4/30/2014
trans-1,2-Dichloroethene	<100	100	ug/kg	4/30/2014
cis-1,3-Dichloropropene	<100	100	ug/kg	4/30/2014
trans-1,3-Dichloropropene	<100	100	ug/kg	4/30/2014
Ethylbenzene	<100	100	ug/kg	4/30/2014
2-Hexanone (MBK)	<500	500	ug/kg	4/30/2014
n-Hexane	<1000	1000	ug/kg	4/30/2014
Methylene Chloride	<500	500	ug/kg	4/30/2014
Methyl Ethyl Ketone (2-butanone)	<500	500	ug/kg	4/30/2014
Methyl Methacrylate	<100	100	ug/kg	4/30/2014
4-Methyl-2-Pentanone	<500	500	ug/kg	4/30/2014
Methyl Tert-Butyl Ether	<100	100	ug/kg	4/30/2014
2-Nitropropane	<100	100	ug/kg	4/30/2014
Pentachloroethane	<100	100	ug/kg	4/30/2014
Propionitrile	<100	100	ug/kg	4/30/2014
Styrene	<100	100	ug/kg	4/30/2014
1,1,1,2-Tetrachloroethane	<100	100	ug/kg	4/30/2014
1,1,2,2-Tetrachloroethane	<100	100	ug/kg	4/30/2014





## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Oil

**Data Entry Batch:** 129165

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Tetrachloroethene (Tetrachloroethylene)	<100	100	ug/kg	4/30/2014
Toluene	<100	100	ug/kg	4/30/2014
1,2,4-Trichlorobenzene	<100	100	ug/kg	4/30/2014
1,1,1-Trichloroethane	<100	100	ug/kg	4/30/2014
1,1,2-Trichloroethane	<100	100	ug/kg	4/30/2014
Trichloroethene (Trichloroethylene)	<100	100	ug/kg	4/30/2014
Trichlorofluoromethane	<100	100	ug/kg	4/30/2014
1,2,3-Trichloropropane	<100	100	ug/kg	4/30/2014
1,1,2 Trichlorotrifluoroethane	<100	100	ug/kg	4/30/2014
1,2,4-Trimethylbenzene	<100	100	ug/kg	4/30/2014
Vinyl Acetate	<100	100	ug/kg	4/30/2014
Vinyl Chloride	<100	100	ug/kg	4/30/2014
Xylenes (Total)	<300	300	ug/kg	4/30/2014
<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Control Limits</u>		
1,2-Dichloroethane-d4	135.0	(68 - 158)		
4-Bromofluorobenzene	128.0	(79 - 136)		
Toluene-d8	122.0	(76 - 129)		



## Laboratory Control Spike QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** LCS/LCSD

**Matrix:** Oil

**Data Entry Batch:** 129165

<u>Parameter</u>	<u>Spike Percent Recovery</u>	<u>Spike Percent Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>RPD Control Limits</u>	<u>Date Analyzed</u>
1,1-Dichloroethene	70.8	75.0	(45 - 133)	5.8	(0-20)	4/30/2014
Benzene	93.7	95.9	(64 - 136)	2.3	(0-20)	4/30/2014
Chlorobenzene	97.8	99.0	(73 - 129)	1.2	(0-20)	4/30/2014
n-Hexane	90.0	95.4	(21 - 166)	5.8	(0-20)	4/30/2014
Trichloroethene (Trichloroethylene)	102.0	109.0	(68 - 126)	6.6	(0-20)	4/30/2014
Toluene	99.4	99.2	(69 - 127)	0.2	(0-20)	4/30/2014

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Percent Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>RPD Control Limits</u>
1,2-Dichloroethane-d4	94.5	93.9	(68 - 158)	0.6	(0-20)
4-Bromofluorobenzene	90.6	84.0	(79 - 126)	7.6	(0-20)
Toluene-d8	89.7	98.8	(76 - 129)	9.7	(0-20)



## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Oil

**Data Entry Batch:** 129188

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<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Gasoline Range Organics: C6-C12	<20	20	mg/kg	4/30/2014
<u>Surrogate</u>	<u>Percent Recovery</u>		<u>Control Limits</u>	
Cumene	91.6		(72 - 126)	



## Laboratory Control Spike QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** LCS/LCSD

**Matrix:** Oil

**Data Entry Batch:** 129188

<u>Parameter</u>	<u>Spike Percent Recovery</u>	<u>Spike Percent Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>RPD Control Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics: C6-C12	100.0	117.0	(65 - 124)	15.7	(0-20)	4/30/2014
<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Percent Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>RPD Control Limits</u>	
Cumene	106.0	96.0	(72 - 126)	9.9	(0-20)	



## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Oil

**Data Entry Batch:** 129136

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Acenaphthene	<250	250	ug/kg	4/30/2014
Acenaphthylene	<250	250	ug/kg	4/30/2014
Anthracene	<250	250	ug/kg	4/30/2014
Benzo(a)Anthracene	<250	250	ug/kg	4/30/2014
Benzo(a)pyrene	<250	250	ug/kg	4/30/2014
Benzo(b)fluoranthene	<250	250	ug/kg	4/30/2014
Benzo(g,h,i)perylene	<250	250	ug/kg	4/30/2014
Benzo(k)fluoranthene	<250	250	ug/kg	4/30/2014
bis(2-chloroethoxy)methane	<250	250	ug/kg	4/30/2014
bis(2-chloroethyl)ether	<250	250	ug/kg	4/30/2014
bis(2-chloroisopropyl)ether	<250	250	ug/kg	4/30/2014
bis(2-Ethylhexyl)phthalate	<250	250	ug/kg	4/30/2014
4-Bromo(phenylphenyl)ether	<250	250	ug/kg	4/30/2014
Butyl benzyl phthalate	<250	250	ug/kg	4/30/2014
Carbazole	<250	250	ug/kg	4/30/2014
4-Chloroaniline	<250	250	ug/kg	4/30/2014
4-Chloro(phenylphenyl)ether	<250	250	ug/kg	4/30/2014
2-Chloronaphthalene	<250	250	ug/kg	4/30/2014
Chrysene	<250	250	ug/kg	4/30/2014
Dibenz(a,h)anthracene	<250	250	ug/kg	4/30/2014
Dibenzofuran	<250	250	ug/kg	4/30/2014
Di-n-butyl Phthalate	<250	250	ug/kg	4/30/2014
1,2-Dichlorobenzene	<250	250	ug/kg	4/30/2014
1,3-Dichlorobenzene	<250	250	ug/kg	4/30/2014
1,4-Dichlorobenzene	<250	250	ug/kg	4/30/2014
3,3-Dichlorobenzidine	<500	500	ug/kg	4/30/2014
Diethyl phthalate	<250	250	ug/kg	4/30/2014
Dimethyl phthalate	<250	250	ug/kg	4/30/2014
2,6-Dinitrotoluene	<250	250	ug/kg	4/30/2014
2,4-Dinitrotoluene	<250	250	ug/kg	4/30/2014
Di-n-octylphthalate	<250	250	ug/kg	4/30/2014
Diphenylamine	<250	250	ug/kg	4/30/2014
1,2-Diphenylhydrazine	<1300	1300	ug/kg	4/30/2014
Fluoranthene	<250	250	ug/kg	4/30/2014
Fluorene	<250	250	ug/kg	4/30/2014
Hexachlorobenzene	<250	250	ug/kg	4/30/2014
Hexachlorobutadiene	<250	250	ug/kg	4/30/2014



## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Oil

**Data Entry Batch:** 129136

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Hexachlorocyclopentadiene	<250	250	ug/kg	4/30/2014
Hexachloroethane	<250	250	ug/kg	4/30/2014
Indeno(1,2,3-cd)pyrene	<250	250	ug/kg	4/30/2014
Isophorone	<250	250	ug/kg	4/30/2014
2-Methylnaphthalene	<250	250	ug/kg	4/30/2014
Naphthalene	<250	250	ug/kg	4/30/2014
2-Nitroaniline	<250	250	ug/kg	4/30/2014
3-Nitroaniline	<250	250	ug/kg	4/30/2014
4-Nitroaniline	<250	250	ug/kg	4/30/2014
Nitrobenzene	<250	250	ug/kg	4/30/2014
N-Nitrosodi-n-propylamine	<250	250	ug/kg	4/30/2014
N-Nitrosodiphenylamine	<250	250	ug/kg	4/30/2014
Phenanthrene	<250	250	ug/kg	4/30/2014
Pyrene	<250	250	ug/kg	4/30/2014
1,2,4-Trichlorobenzene	<250	250	ug/kg	4/30/2014
4-Chloro-3-methylphenol	<250	250	ug/kg	4/30/2014
2-Chlorophenol	<250	250	ug/kg	4/30/2014
o-Cresol	<250	250	ug/kg	4/30/2014
m-Cresol**	<250	250	ug/kg	4/30/2014
p-Cresol**	<250	250	ug/kg	4/30/2014
2,4-Dichlorophenol	<250	250	ug/kg	4/30/2014
2,4-Dimethylphenol	<250	250	ug/kg	4/30/2014
2,4-Dinitrophenol	<1300	1300	ug/kg	4/30/2014
4,6-Dinitro-2-methylphenol	<1300	1300	ug/kg	4/30/2014
2-Nitrophenol	<250	250	ug/kg	4/30/2014
4-Nitrophenol	<1300	1300	ug/kg	4/30/2014
N-Nitrosodimethylamine	<250	250	ug/kg	4/30/2014
Pentachlorophenol	<1300	1300	ug/kg	4/30/2014
Phenol	<250	250	ug/kg	4/30/2014
2,4,5-Trichlorophenol	<250	250	ug/kg	4/30/2014
2,4,6-Trichlorophenol	<250	250	ug/kg	4/30/2014





## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Oil

**Data Entry Batch:** 129136

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<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
<u>Surrogate</u>	<u>Percent Recovery</u>		<u>Control Limits</u>	
2,4,6-Tribromophenol	76.8		(43 - 142)	
2-Fluorobiphenyl	84.5		(53 - 115)	
2-Fluorophenol	71.5		(41 - 101)	
Nitrobenzene-d5	83.1		(56 - 105)	
Phenol-d6	74.7		(46 - 108)	
p-Terphenyl-d14	90.7		(52 - 140)	



## Laboratory Control Spike QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** LCS

**Matrix:** Oil

**Data Entry Batch:** 129136

<u>Parameter</u>	<u>Spike Percent Recovery</u>	<u>Control Limits</u>	<u>Date Analyzed</u>
1,2,4-Trichlorobenzene	76.0	(48.4 - 106.0)	4/30/2014
1,4-Dichlorobenzene	72.7	(47.1 - 97.5)	4/30/2014
2,4-Dinitrotoluene	76.0	(56.7 - 112.0)	4/30/2014
2-Chlorophenol	75.1	(51.0 - 94.0)	4/30/2014
4-Chloro-3-methylphenol	71.3	(60.2 - 103.0)	4/30/2014
4-Nitrophenol	49.2	(29.8 - 125.0)	4/30/2014
Acenaphthene	76.5	(52.3 - 111.0)	4/30/2014
N-Nitrosodi-n-propylamine	76.2	(39.2 - 131.0)	4/30/2014
Pentachlorophenol	62.3	(48.0 - 113.0)	4/30/2014
Phenol	65.8	(30.8 - 104.0)	4/30/2014
Pyrene	84.1	(52.5 - 124.0)	4/30/2014

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Control Limits</u>
2,4,6-Tribromophenol	87.7	(42.7 - 142.0)
2-Fluorobiphenyl	85.8	(52.5 - 115.0)
2-Fluorophenol	76.0	(41.2 - 101.0)
Nitrobenzene-d5	81.6	(56.2 - 105.0)
Phenol-d6	82.1	(45.7 - 108.0)
p-Terphenyl-d14	95.9	(51.5 - 140.0)



## Matrix Spike QC Report

QC Type: 1404-00428-003 MS/MSD

Matrix: Solid

Data Entry Batch: 129137

Analysis Date 4/30/2014

<u>Parameter</u>	<u>MS Recovery</u>	<u>MSD Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>Control Limits</u>
1,4-Dichlorobenzene	60.7 %	62.5 %	(47 - 98)	2.9	(0 - 22)
2,4-Dinitrotoluene	64.2 %	67.3 %	(57 - 112)	4.7	(0 - 20)
2-Chlorophenol	62.7 %	64.2 %	(51 - 94)	2.4	(0 - 23)
4-Chloro-3-methylphenol	47.2 %	61.5 %	(60 - 103)	26.3	(0 - 21)
4-Nitrophenol	44.3 %	42.3 %	(30 - 125)	4.6	(0 - 24)
Acenaphthene	70.9 %	70.0 %	(52 - 111)	1.3	(0 - 22)
N-Nitrosodi-n-propylamine	67.4 %	70.2 %	(39 - 131)	4.1	(0 - 27)
Pentachlorophenol	43.6 %	47.5 %	(48 - 113)	8.6	(0 - 21)
Phenol	56.9 %	55.8 %	(31 - 104)	2.0	(0 - 23)
Pyrene	80.3 %	84.7 %	(53 - 124)	5.3	(0 - 17)

<u>Surrogate</u>	<u>Recovery</u>	<u>Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>Control Limits</u>
2,4,6-Tribromophenol	74.0 %	72.6 %	(43 - 142)	1.4	(0 - 24)
2-Fluorobiphenyl	71.0 %	75.0 %	(53 - 115)	5.5	(0 - 27)
2-Fluorophenol	67.0 %	66.0 %	(41 - 101)	1.5	(0 - 32)
Nitrobenzene-d5	71.0 %	67.8 %	(56 - 105)	4.3	(0 - 22)
Phenol-d6	70.0 %	73.2 %	(46 - 108)	4.2	(0 - 29)
p-Terphenyl-d14	73.0 %	76.3 %	(52 - 140)	4.0	(0 - 20)



## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Oil

**Data Entry Batch:** 129138

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<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Extractable Petroleum Hydrocarbons: C10-C20	<100	100	mg/kg	4/29/2014
Extractable Petroleum Hydrocarbons: C20-C34	<100	100	mg/kg	4/29/2014
 <u>Surrogate</u>	 <b>Percent Recovery</b>		 <b>Control Limits</b>	
n-Triacontane	94.8		(35 - 138)	



## Laboratory Control Spike QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** LCS/LCSD

**Matrix:** Oil

**Data Entry Batch:** 129138

<u>Parameter</u>	<u>Spike Percent Recovery</u>	<u>Spike Percent Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>RPD Control Limits</u>	<u>Date Analyzed</u>
Extractable Petroleum Hydrocarbons: C10-C20	71.1	72.2	(47 - 123)	1.5	(0-20)	4/29/2014
<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Percent Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>RPD Control Limits</u>	
n-Triacontane	95.5	95.4	(35 - 138)	0.1	(0-20)	



## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Oil

**Data Entry Batch:** 129161

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Aluminum: SW846-6010B	<25	25	mg/kg	4/29/2014
Antimony: SW846-6010B	<2.0	2.0	mg/kg	4/29/2014
Arsenic: SW846-6010B	<1.0	1.0	mg/kg	4/29/2014
Barium: SW846-6010B	<0.50	0.50	mg/kg	4/29/2014
Beryllium: SW846-6010B	<0.25	0.25	mg/kg	4/29/2014
Cadmium: SW846-6010B	<0.25	0.25	mg/kg	4/29/2014
Calcium: SW846-6010B	<25	25	mg/kg	4/29/2014
Chromium: SW846-6010B	<0.50	0.50	mg/kg	4/29/2014
Cobalt: SW846-6010B	<0.50	0.50	mg/kg	4/29/2014
Copper: SW846-6010B	<2.5	2.5	mg/kg	4/29/2014
Iron: SW846-6010B	<10.0	10.0	mg/kg	4/29/2014
Lead: SW846-6010B	<1.0	1.0	mg/kg	4/29/2014
Magnesium: SW846-6010B	<25	25	mg/kg	4/29/2014
Manganese: SW846-6010B	<0.50	0.50	mg/kg	4/29/2014
Mercury: SW846-7471B	<0.12	0.12	mg/kg	4/29/2014
Nickel: SW846-6010B	<0.25	0.25	mg/kg	4/29/2014
Potassium: SW846-6010B	<25	25	mg/kg	4/29/2014
Selenium: SW846-6010B	<2.5	2.5	mg/kg	4/29/2014
Silver: SW846-6010B	<0.50	0.50	mg/kg	4/29/2014
Sodium: SW846-6010B	<25	25	mg/kg	4/29/2014
Thallium: SW846-6010B	<2.5	2.5	mg/kg	4/29/2014
Vanadium: SW846-6010B	<2.5	2.5	mg/kg	4/29/2014
Zinc: SW846-6010B	<1.0	1.0	mg/kg	4/29/2014





## Laboratory Control Spike QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** LCS

**Matrix:** Oil

**Data Entry Batch:** 129161

<u>Parameter</u>	<u>Spike Percent Recovery</u>	<u>Control Limits</u>	<u>Date Analyzed</u>
Silver: SW846-6010B	105.0	(73.9 - 119.0)	4/29/2014
Aluminum: SW846-6010B	94.7	(79.0 - 118.0)	4/29/2014
Arsenic: SW846-6010B	101.0	(84.4 - 111.0)	4/29/2014
Barium: SW846-6010B	102.0	(86.2 - 115.0)	4/29/2014
Beryllium: SW846-6010B	98.5	(82.0 - 113.0)	4/29/2014
Calcium: SW846-6010B	105.0	(80.0 - 120.0)	4/29/2014
Cadmium: SW846-6010B	99.1	(85.4 - 110.0)	4/29/2014
Cobalt: SW846-6010B	101.0	(85.1 - 112.0)	4/29/2014
Chromium: SW846-6010B	101.0	(85.9 - 114.0)	4/29/2014
Copper: SW846-6010B	102.0	(85.6 - 112.0)	4/29/2014
Iron: SW846-6010B	111.0	(79.9 - 126.0)	4/29/2014
Mercury: SW846-7471B	85.5	(85.4 - 132.0)	4/29/2014
Potassium: SW846-6010B	104.0	(80.0 - 120.0)	4/29/2014
Magnesium: SW846-6010B	102.0	(82.8 - 123.0)	4/29/2014
Manganese: SW846-6010B	98.3	(86.3 - 114.0)	4/29/2014
Sodium: SW846-6010B	121.0	(83.7 - 137.0)	4/29/2014
Nickel: SW846-6010B	100.0	(87.1 - 112.0)	4/29/2014
Lead: SW846-6010B	104.0	(87.2 - 115.0)	4/29/2014
Antimony: SW846-6010B	100.0	(79.6 - 122.0)	4/29/2014
Selenium: SW846-6010B	101.0	(85.2 - 113.0)	4/29/2014
Thallium: SW846-6010B	102.0	(88.5 - 118.0)	4/29/2014
Vanadium: SW846-6010B	111.0	(84.2 - 117.0)	4/29/2014
Zinc: SW846-6010B	117.0	(83.2 - 118.0)	4/29/2014



## Matrix Spike QC Report

QC Type: 1404-00428-001 MS/MSD

Matrix: Sludge

Data Entry Batch: 129143

Analysis Date 4/29/2014

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<u>Parameter</u>	<u>MS Recovery</u>	<u>MSD Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>Control Limits</u>
Silver: SW846-6010B	24.3 %	38.5 %	(75 - 125)	45.4	(0 - 20)
Arsenic: SW846-6010B	96.7 %	102.4 %	(75 - 125)	5.7	(0 - 20)
Barium: SW846-6010B	166.2 %	145.5 %	(75 - 125)	13.3	(0 - 20)
Cadmium: SW846-6010B	116.9 %	127.7 %	(75 - 125)	8.8	(0 - 20)
Chromium: SW846-6010B	80.8 %	100.0 %	(75 - 125)	21.2	(0 - 20)
Mercury: SW846-7471B	113.4 %	99.7 %	(85 - 132)	12.9	(0 - 22)
Nickel: SW846-6010B	104.2 %	131.2 %	(75 - 125)	23.0	(0 - 20)
Lead: SW846-6010B	143.7 %	195.5 %	(75 - 125)	30.5	(0 - 20)
Selenium: SW846-6010B	100.1 %	104.4 %	(75 - 125)	4.2	(0 - 20)



## Post Digestion Spike QC Report

**QC Type:** 1404-00428-001 PDS

**Matrix:** Sludge

**Data Entry Batch:** 129143

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<u>Parameter</u>	<u>Spike Percent Recovery</u>	<u>Date Analyzed</u>
Arsenic: SW846-6010B	97.8	4/29/2014
Barium: SW846-6010B	95.0	4/29/2014
Cadmium: SW846-6010B	95.1	4/29/2014
Chromium: SW846-6010B	95.6	4/29/2014
Lead: SW846-6010B	95.6	4/29/2014
Nickel: SW846-6010B	94.5	4/29/2014
Selenium: SW846-6010B	98.3	4/29/2014
Silver: SW846-6010B	71.8	4/29/2014



## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Oil

**Data Entry Batch:** 129177

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Aroclor 1016	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1221	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1232	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1242	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1248	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1254	<1.0	1.0	mg/kg	4/29/2014
Aroclor 1260	<1.0	1.0	mg/kg	4/29/2014
<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Control Limits</u>		
Decachlorobiphenyl	84.6	(56 - 131)		
Tetrachloro-m-xylene	63.2	(59 - 121)		



## Laboratory Control Spike QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** LCS/LCSD

**Matrix:** Oil

**Data Entry Batch:** 129177

<u>Parameter</u>	<u>Spike Percent Recovery</u>	<u>Spike Percent Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>RPD Control Limits</u>	<u>Date Analyzed</u>
Aroclor 1016	53.4	55.0	(34 - 143)	3.0	(0-20)	4/29/2014
Aroclor 1260	53.2	54.4	(44 - 128)	2.2	(0-20)	4/29/2014

<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Percent Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>RPD Control Limits</u>
Decachlorobiphenyl	69.0	68.8	(56 - 131)	0.3	(0-20)
Tetrachloro-m-xylene	65.6	67.0	(59 - 121)	2.1	(0-20)



## Method Blank QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** Method Blank

**Matrix:** Solid

**Data Entry Batch:** 129179

<u>Parameter</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Date Analyzed</u>
Aroclor 1016	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1221	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1232	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1242	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1248	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1254	<0.10	0.10	mg/kg	4/29/2014
Aroclor 1260	<0.10	0.10	mg/kg	4/29/2014
<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Control Limits</u>		
Decachlorobiphenyl	76.0	(66 - 131)		
Tetrachloro-m-xylene	111.0	(64 - 130)		





## Laboratory Control Spike QC Report

**EAG Workorder:** 140400451

**Client:** Weston Solutions

**Client Project:** Baker Perkins SA

**QC Type:** LCS

**Matrix:** Solid

**Data Entry Batch:** 129179

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<u>Parameter</u>	<u>Spike Percent Recovery</u>	<u>Control Limits</u>	<u>Date Analyzed</u>
Aroclor 1016	130.0	(75.9 - 141.0)	4/29/2014
Aroclor 1260	126.0	(73.4 - 140.0)	4/29/2014
<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Control Limits</u>	
Decachlorobiphenyl	77.4	(66.2 - 131.0)	
Tetrachloro-m-xylene	111.0	(64.2 - 130.0)	



## Matrix Spike QC Report

**QC Type:** 1404-00494-001 MS/MSD

**Matrix:** Solid

**Data Entry Batch:** 129219

**Analysis Date** 4/29/2014

<u>Parameter</u>	<u>MS Recovery</u>	<u>MSD Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>Control Limits</u>
Aroclor 1016	105.0 %	122.0 %	(76 - 141)	15.0	(0 - 19)
Aroclor 1260	85.0 %	94.5 %	(73 - 140)	10.6	(0 - 16)
<u>Surrogate</u>	<u>Recovery</u>	<u>Recovery</u>	<u>Control Limits</u>	<u>RPD</u>	<u>Control Limits</u>
Decachlorobiphenyl	65.0	74.4	(66 - 131)	12.9	(0 - 11)
Tetrachloro-m-xylene	51.0	116.4	(64 - 130)	77.5	(0 - 13)



## Sample Duplicate QC Report

**QC Type:** 1404-00435-001D

**Matrix:** Sludge

**Data Entry Batch:** 129184

**Date Analyzed:** 05/02/2014

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<u>Parameter</u>	<u>Sample Result</u>	<u>Sample Duplicate Result</u>	<u>RPD</u>	<u>RPD Control Limits</u>
Corrosivity: SW846-9045C	7.8	7.8	0	(0-20)



# EA GROUP

Environmental Analysis  
and Management

## Sample Receipt Confirmation

April 25, 2014

**Weston Solutions**

**Lisa Graczyk**

Client Project: Baker Perkins SA

EA Group Project Number: 140400451

Shipped Via: EA Group Courier

Checked By: LAF

			Comment / Action Taken	
Were coolers sealed? (tape or custody seals)	Y	N	N/A	
Was a Chain of Custody form included?	Y	N		
Was the Chain of Custody signed and dated?	Y	N		
Was the client & project name identified and legible	Y	N		
Were sample containers intact?	Y	N		
Were the sample labels intact and legible?	Y	N	N/A	
Did the samples match the Chain of Custody?	Y	N		
Were the correct sample containers / preservatives used?	Y	N		
Is there sufficient sample volume for the requested analysis?	Y	N		
Did the samples arrive within holding time?	Y	N		
Was the pH tested on preserved water samples?	Y	N	N/A	
Did the pH meet method requirements?	Y	N	N/A	
Was any preservative added at login?	Y	N	N/A	
Were air bubbles present in VOA water samples?	Y	N		
For 8260B / 5035 samples, was an Encore or Terracore provided?	Y	N		
For above analysis, was a container provided for moisture?	Y	N		
Was proper collection media used for air samples?	Y	N	N/A	
Type of ice used	wet	ice packs	dry ice	none
Were any samples frozen?	Y	N		
Temperature of samples	5.9	C		



# EAG GROUP

7118 INDUSTRIAL PARK BLVD.  
MENTOR, OHIO 44060-5314  
(440) 951-3514  
FAX (440) 951-3774  
(800) 875-3514  
www.eagroupohio.com  
customerservice@eagroupohio.com

Company Name WESTON SOLUTIONS, INC.

Report Address 80 NORTH WILKINET DRIVE, SUITE 2035

City CHICAGO State IL Zip 60606

Billing Address SAME

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone 312-424-3339 Fax 312-424-3330

Report Attention LEAGUEZYN @ CAS-DYNAMIC

Project Name BIKER BEAKUS SA

P.O. # Quote # \_\_\_\_\_

SAMPLE IDENTIFICATION

MATRIX

COLLECTION TIME

COLLECTION DATE

Grab or Composite (G/C)

# of Containers

Matrix Key:  
Air - AR  
Liquid - LQ  
Off - OL  
Other - Specify  
Solid/Soil - SL  
Water - WT  
Wipe - WP

TURNAROUND (A)

☐ RUSH

Target Date: \_\_\_\_\_

☒ NORMAL

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
ETC....

Temp in °C 5.94

Received on Ice Y

Cooler Sealed N

SAMPLE REMARKS:  
CONDITION,  
ETC....

PREPARED BY

DATE

TIME

REMARKS:  
CONDITION,  
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Temp in °C 5.94

Received on Ice Y

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